

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:11:44 ; Search time 196 Seconds
(without alignments)
446.104 Million cell updates/sec

Title: US-09-815-306a-34

Sequence: 1 LPICGGAARCCVTLRDLPD.....HKIDNYLKLKCRITIHNNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1042	100.0	200	8	ADG82526
2	1042	100.0	227	4	AAg78337
3	1042	100.0	385	8	ADG82531
4	1035	99.3	199	2	AAV31764
5	1035	99.3	199	5	ABG34847
6	1035	99.3	199	6	ABU09878
7	1035	99.3	199	8	ADQ38214
8	1035	99.3	199	8	ADQ38214
9	1035	99.3	200	8	AAW92258
10	1035	99.3	200	8	ADQ38217
11	1035	99.3	227	2	AAK05231
12	1035	99.3	227	4	AAg78336
13	1035	99.3	227	4	AAU28057
14	1035	99.3	227	8	ADQ48810
15	1035	99.3	227	8	ADQ38216
16	1035	99.3	227	8	ADY62734
17	1035	99.3	351	2	AAr78691
18	1031	98.9	228	2	AAW23626
19	1031	98.9	228	2	AAW23620
20	1030	98.8	199	3	AAV78428
21	1030	98.8	199	7	ADK41867
22	1028	98.7	199	6	ABU09846
23	1028	98.7	359	2	AAK05805
24	1026	98.5	199	8	ADQ38221

25	1026	98.5	227	1	AAp82079	AAp82079 Human pro
26	1020	97.9	199	8	ADR20895	ADR20895 Human mat
27	1018.5	97.7	579	8	ADG82532	ADG82532 Prolactin
28	1018.5	97.7	942	8	ADG82533	ADG82533 Prolactin
29	1014	97.3	199	2	AAW23629	AAW23629 Human pro
30	1010	96.9	199	8	ADQ38222	ADQ38222 Modified
31	1002	96.2	199	8	ADQ38220	ADQ38220 Modified
32	1001	96.1	199	8	ADR20988	ADR20988 Human pro
33	998	95.8	199	8	ADR20989	ADR20989 Human pro
34	986	94.6	199	8	ADQ38219	ADQ38219 Modified
35	983	94.3	199	8	ADR20990	ADR20990 Human pro
36	970	93.1	199	8	ADR20991	ADR20991 H180D/N18
37	960	92.1	199	8	ADQ38218	ADQ38218 Modified
38	932	89.4	212	8	ABW83819	ABW83819 Human dia
39	887	85.1	199	6	ABU09858	ABU09858 Ancestral
40	873	83.8	199	6	ABU09856	ABU09856 Horse pro
41	869	83.4	199	6	ABU09855	ABU09855 Camel pro
42	865	83.0	199	6	ABU09864	ABU09864 Ancestral
43	858	82.3	199	6	ABU09854	ABU09854 Pig prola
44	857	82.2	199	6	ABU09850	ABU09850 Feedback w
45	786	75.4	240	6	ABR43658	ABr43658 Ovine pro

ALIGNMENTS

RESULT 1	ADG82526	ADG82526 standard; protein; 200 AA.
ID	ADG82526	ADG82526 standard; protein; 200 AA.
XX	ADG82526	
AC	ADG82526	
DT	11-MAR-2004	(first entry)
XX		
DE	Human prolactin-G129R.	
XX		
KW	Human; prolactin; antagonist; cytostatic; gene; mutant; mutein.	
OS	Synthetic.	
OS	Homo sapiens.	
FH	Key	Location/Qualifiers
FT	Misc-difference 130	/note= "Wild-type Gly substituted by Arg"
XX		
PN	WO2003102148-A2.	
XX		
PD	11-DEC-2003.	
XX		
PF	02-JUN-2003; 2003WO-US017216.	
XX		
PR	31-MAY-2002; 2002US-0384121P.	
XX		
PA	(GREEN-) GREENVILLE HOSPITAL SYSTEM.	
PA	(CHEN/) CHEN W Y.	
PI	Chen WY;	
DR	WPI; 2004-043098/04.	
DR	N-PDSB; ADG82527.	
PT	Treating cancer comprises administering to a patient an amount of a	
PT	protein having a receptor-antagonizing domain (e.g. prolactin-antagonist	
PT	domain) and an angiogenesis-inhibiting domain (e.g. endostatin or	
PT	angiotensin).	
PS	Claim 10; SEQ ID NO 1; 60pp; English.	
XX		
CC	The present sequence is the protein sequence of human prolactin-G129R, in	
CC	which the native Gly-129 residue is substituted by Arg. The invention	
CC	provides medicaments that are capable of interfering with the prolactin	
CC	signalling mechanism in a cancer cell and inhibiting angiogenesis in	
CC	tumour cell lines. A claimed method for treating cancer involves	

CC administering a protein having a receptor-antagonizing domain and an
CC angiogenesis inhibiting domain. The protein is especially a prolactin
CC antagonist-endostatin ADG82531, a prolactin antagonist-angiostatin
CC ADG82532 or a prolactin antagonist-Flk-1-bp ADG82533 fusion protein,
CC where the prolactin antagonist is prolactin-G129R. The combined effects
CC of endocrine-based and targeted anti-angiogenesis therapies greatly
CC enhance the treatment of cancer.

XX Sequence 200 AA;

Query Match 100.0%; Score 1042; DB 8; Length 200;
Best Local Similarity 100.0%; Pred. No. 3,7e-93;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICGGARGCQVTLRLDFBRAVLSHYIHNLSSSEMFSEPKRYTHGRTTKAINSCHT 60
DB 2 LPICGGARGCQVTLRLDFBRAVLSHYIHNLSSSEMFSEPKRYTHGRTTKAINSCHT 61
QY 61 SSLATPEDEKQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMQEAPEALISKAYEIE 120
DB 62 SSLATPEDEKQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMQEAPEALISKAYEIE 121
QY 121 EOTRLLERMEELIVSQVHPETKENETYPWMSGLSLOMADEBSRLSAYNNLLHCLRRDSH 180
DB 122 EOTRLLERMEELIVSQVHPETKENETYPWMSGLSLOMADEBSRLSAYNNLLHCLRRDSH 181

QY 181 KIDNYLKLKLCRIIHNNNC 199
DB 182 KIDNYLKLKLCRIIHNNNC 200

RESULT 2

AAAG78337 standard; protein; 227 AA.

AC AAG78337;

DT 22-JAN-2002 (first entry)

DE Mutant human prolactin (hPRL-G129R), a prolactin receptor antagonist.

XX Breast cancer; apoptosis inducer; positive immunomodulator domain;
KM immune response; cytostatic; T lymphocyte cytotoxicity enhancer;
KM STAT phosphorylation inhibitor; prolactin antagonist; interleukin-2;
KM IL-2; interferon gamma; IFN gamma; IL-12; mutant; mutein.

OS Homo sapiens.
OS Synthetic.

XX Key Location/Qualifiers
FH Misc-difference 129
FT /note= "Arg replaces wild-type Gly"

PN WO200170985-A2.

PD 27-SEP-2001.

DE 23-MAR-2001; 2001WO-US009284.

PR 23-MAR-2000; 2000US-0191457P.

XX (GREE-) GREENVILLE HOSPITAL SYSTEM.

PA Chen WY, Wagner TE;

XX WPI, 2001-611504/70.

PT Novel polypeptide for treating cancer comprises a receptor antagonizing
PT domain which also functions as an apoptosis domain, such as the prolactin
PT antagonist domain, and a positive immunomodulator domain.

PS Example 3, Page; 47pp; English.

CC This sequence represents a mutant form of human prolactin (AAG78336)
CC where Gly129 is substituted with Arg. The protein is a prolactin receptor
CC antagonist and disrupts the normal prolactin apoptosis-blocking
CC mechanism. The specification describes a novel protein comprising a
CC receptor antagonizing domain (having a fully defined sequence as given in
CC the specification, or its conservative variant) and a positive
CC immunomodulator domain. The object of the invention is to provide a
CC medicament that is capable of interfering with the prolactin signaling
CC of a cancer cell, a pharmaceutical composition comprising the protein and
CC a carrier vehicle is described. A receptor antagonizing domain is a
CC ligand that specifically binds to a receptor associated with a disorder
CC like cancer and can be an apoptosis-promoting domain. A positive
CC immunomodulator domain is one that augments an immune response, preferably
CC against the target cell, e.g. interleukin (IL)-2, interleukin (IL)-12 and
CC interferon (IFN) gamma. The protein has cytostatic activity and is useful
CC for treating cancer in a patient. The protein is an apoptosis inducer, a
CC T lymphocyte cytotoxicity enhancer, a signal transducer and activator of
CC transcription (STAT) phosphorylation inhibitor and a prolactin
CC antagonist. The targeted therapy approach is designed to provide
CC dramatically decreased systemic concentrations of positive
CC immunomodulator domain, e.g. IL-2, thereby reducing its toxicity in vivo.
CC NOTE: The present sequence is not given in the specification but has been
CC created using the information given in Example 3

XX Sequence 227 AA;

Query Match 100.0%; Score 1042; DB 4; Length 227;
Best Local Similarity 100.0%; Pred. No. 4,4e-93;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICGGARGCQVTLRLDFBRAVLSHYIHNLSSSEMFSEPKRYTHGRTTKAINSCHT 60

DB 29 LPICGGARGCQVTLRLDFBRAVLSHYIHNLSSSEMFSEPKRYTHGRTTKAINSCHT 88

QY 61 SSLATPEDEKQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMQEAPEALISKAYEIE 120

DB 89 SSLATPEDEKQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMQEAPEALISKAYEIE 148

QY 121 EOTRLLERMEELIVSQVHPETKENETYPWMSGLSLOMADEBSRLSAYNNLLHCLRRDSH 180

DB 149 EOTRLLERMEELIVSQVHPETKENETYPWMSGLSLOMADEBSRLSAYNNLLHCLRRDSH 208

QY 181 KIDNYLKLKLCRIIHNNNC 199

DB 209 KIDNYLKLKLCRIIHNNNC 227

RESULT 3

ADG82531 standard; protein; 385 AA.

AC ADG82531;

DT 11-MAR-2004 (first entry)

DE Prolactin-G129R-endostatin fusion protein.

XX Human; prolactin; antagonist; cytostatic; mutein; mutant; endostatin.

OS Synthetic.

OS Homo sapiens.

XX Key Location/Qualifiers
FH Domain 2..200
FT /label = Prolactin-G129R
FT Misc-difference 130
FT /note= "Wild-type Gly substituted by Arg"

PN WO2003102148-A2.

PD 11-DEC-2003.

XX 02-JUN-2003; 2003WO-US017216.
 XX 31-MAY-2002; 2002US-0384121P.
 XX (GREE-) GREENVILLE HOSPITAL SYSTEM.
 PA (CHEN/) CHEN W Y.
 XX Chen WY;
 XX MPI: 2004-043098/04.
 DR N-PSDB; ADG82530.
 XX
 PT Treating cancer comprises administering to a patient an amount of a
 PT protein having a receptor-antagonizing domain (e.g. prolactin-antagonist
 PT domain) and an angiogenesis-inhibiting domain (e.g. endostatin or
 PT angiofstatin).
 XX
 XX Disclosure; SEQ ID NO 6; 60pp; English.
 XX
 CC The present sequence is the protein sequence of a fusion protein
 CC comprising human prolactin-g129R, in which the native Gly-129 residue is
 CC substituted by Arg, and endostatin. The invention provides medicaments
 CC that are capable of interfering with the prolactin signalling mechanism
 CC in a cancer cell and inhibiting angiogenesis in tumour cell lines. A
 CC claimed method for treating cancer involves administering a fusion
 CC protein having a receptor-antagonizing domain and an angiogenesis
 CC inhibiting domain, such as the present fusion protein. The combined
 CC effects of endocrine-based and targeted anti-angiogenesis therapies
 CC greatly enhance the treatment of cancer.
 XX
 SQ Sequence 385 AA;

Query Match 100.0%; Score 1042; DB 8; Length 385;
 Best Local Similarity 100.0%; Pred. No. 8.9e-93;
 Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICPGGARCOVTLRLDFRAVAVLSHYIHNLSSEMFSEFDKRYTHRGFTKAINSCHT 60
 DB 2 LPICPGARCOVTLRLDFRAVAVLSHYIHNLSSEMFSEFDKRYTHRGFTKAINSCHT 61
 QY 61 SSLATPEDEYEQAOQNMQKFLSLIVSLSNMPEPLVHTYERGMDEAPALISKAVEIE 120
 DB 62 SSLATPEDEYEQAOQNMQKFLSLIVSLSNMPEPLVHTYERGMDEAPALISKAVEIE 121
 QY 121 EOTKRLERMEELIVSOVHPETKENETYPVWSGLPSIQMDEBSRLSAYTNLHCLARDSH 180
 DB 122 EOTKRLERMEELIVSOVHPETKENETYPVWSGLPSIQMDEBSRLSAYTNLHCLARDSH 181
 QY 181 KIDNYLKLKCRITIHNNNC 199
 DB 182 KIDNYLKLKCRITIHNNNC 200

RESULT 4
 AAY31764
 ID AAY31764 standard; protein; 199 AA.
 XX
 AC AAY31764;
 XX
 DT 06-DEC-1999 (first entry)
 XX
 DE Human prolactin.
 XX
 KM Prolactin; human; variant; protein engineering.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 59 /note="optionally substituted by Phe in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 60

PT /note="optionally substituted by Ser in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 61 /note="optionally substituted by Glu in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 63 /note="optionally substituted by Ile in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 64 /note="optionally substituted by Pro in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 67 /note="optionally substituted by Ser in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 68 /note="optionally substituted by Asn in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 69 /note="optionally substituted by Arg in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 71 /note="optionally substituted by Glu in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 72 /note="optionally substituted by Thr in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 75 /note="optionally substituted by Lys in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 76 /note="optionally substituted by Ser in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 77 /note="optionally substituted by Asn in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 78 /note="optionally substituted by Lys in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 79 /note="optionally substituted by Glu in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 180 /note="optionally substituted by Asp in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 184 /note="optionally substituted by Thr in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 185 /note="optionally substituted by Phe in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 187 /note="optionally substituted by Arg in human prolactin
 FT variant of Claim 8"
 PN US955346-A.
 XX 21-SEP-1999.
 PD
 XX 07-JUN-1995; 95US-00476999.
 PF
 XX 28-OCT-1988; 88US-00264611.
 PR 26-OCT-1989; 89US-00428066.
 PR 27-APR-1992; 92US-00875204.
 PR 13-OCT-1992; 92US-00960227.
 PR 02-FEB-1994; 94US-00190723.
 XX
 PA (GETH) GENENTECH INC.
 XX
 PI Cunningham BC, Wells JA;
 XX
 DR MPI; 1999-560495/47.
 XX Isolated nucleic acids encoding variants of human prolactin and placental

PT Lactogen useful for identifying active domains within those proteins.
XX
XX Claim 7, Fig 2, 86pp; English.
XX
CC This is the amino acid sequence of human prolactin. The invention
CC provides a method for the systematic analysis of the structure and
CC function of polypeptides by identifying active domains which influence
CC the activity of the polypeptide with a target substance, and a method for
CC identifying the active amino acid residues within the active domain of a
CC polypeptide. It also provides polypeptide variants comprising segment-
CC substituted and residue-substituted growth hormones, prolactins and
CC placental lactogens. Claimed variants of human prolactin have 1-19 amino
CC acid substitutions when compared to the wild-type sequence, selected from
CC H59P, T60S, S61E, L63I, A64P, E67S, D68N, K69R, Q71E, A72T, M75K, N76S,
CC Q77N, K78I, D79E, H180D, N184T, Y185F and K185R. These mutations
CC inactivate the active domains and binding sites of the protein.
CC Identifying receptor binding sites in hormones permits the rational
CC design of receptor specific variants. Nucleic acids encoding the
CC variants, expression vectors and host cells are also claimed
XX
SQ Sequence 199 AA;
Query Match 99.3%; Score 1035; DB 2; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 LPICPGGAAACQVTLRDLFRAVAVLSHYIHNLSSMFSEFDRYTHRGFTTKAINSCHT 60
DB 1 LPICPGGAAACQVTLRDLFRAVAVLSHYIHNLSSMFSEFDRYTHRGFTTKAINSCHT 60
OY 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
OY 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 181 KIDNYLKLKCRIRIHNHNC 199
DB 181 KIDNYLKLKCRIRIHNHNC 199
OY 181 KIDNYLKLKCRIRIHNHNC 199
DB 181 KIDNYLKLKCRIRIHNHNC 199
RESULT 5
ID ABG94847 standard; protein; 199 AA.
XX
XX ABG94847;
XX
XX DT 03-DEC-2002 (first entry)
XX
XX Human prolactin.
XX
XX Growth hormone; placental lactogen; prolactin; active domain; hGH;
XX structure-function relationship; segment-substituted polypeptide.
XX
XX Homo sapiens.
XX
XX US6428954-B1.
XX
XX PD 06-AUG-2002.
XX
XX PF 06-JUN-1995; 95US-00483039.
XX
XX PR 28-OCT-1988; 88US-00264611.
XX PR 26-OCT-1989; 89US-00428066.
XX PR 27-APR-1992; 92US-00875204.
XX PR 13-OCT-1992; 92US-00960227.
XX PR 02-FEB-1994; 94US-00190723.
XX
XX (GETH) GENENTECH INC.
XX
XX Wells JA, Cunningham BC,
XX PI

XX
XX WPI; 2002-696875/75.
XX
PT Identifying active domains within cloned polypeptides of known amino acid
PT sequence by substituting analog segments into the parent polypeptide is
PT useful to determine the relationship between structure and function.
XX
XX Disclosure; Fig 2, 86pp; English.
XX
CC The invention relates to identifying an unknown active domain in a region
CC of known amino acid sequence in a parent polypeptide e.g. human growth
CC hormone (hGH) which has been cloned and has a pre-identified biological
CC activity, where the active domain interacts with a target when the parent
CC polypeptide is in its native-folded form and the interaction is
CC responsible for the biological activity comprising: (a) comparing the
CC amino acid sequence or polypeptide structure in the region of known amino
CC acid sequence of hGH with the amino acid sequence of an analogue
CC structure in a region of known amino acid sequence of an analogue
CC polypeptide (e.g. prolactin, placental lactogen or porcine growth
CC hormone) which has at least 15% homology with hGH alpha-carbon
CC coordinates within about 2-3.5 angstroms of hGH alpha-carbon
CC for about 60% of the analogue sequence, where any interaction of the
CC analogue with the target is different from target interaction with hGH;
CC (b) substituting DNA encoding an analogue polypeptide segment from the
CC analogue into DNA encoding the full length hGH, and expressing a segment-
CC substituted polypeptide; (c) contacting the segment-substituted
CC polypeptide with the target to determine interaction; (d) repeating steps
CC (b) and (c) with a second analogous polypeptide segment; and (e)
CC comparing the difference between activity of the first and second segment-
CC substituted polypeptides as an indication of the location of the unknown
CC active domain in hGH. The method is useful for determining the
CC relationship between structure and function of known polypeptide
CC sequences. The present sequence is that of human growth hormone or its
CC analogue (prolactin, placental lactogen or porcine growth hormone)
XX
SQ Sequence 199 AA;
Query Match 99.3%; Score 1035; DB 5; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 LPICPGGAAACQVTLRDLFRAVAVLSHYIHNLSSMFSEFDRYTHRGFTTKAINSCHT 60
DB 1 LPICPGGAAACQVTLRDLFRAVAVLSHYIHNLSSMFSEFDRYTHRGFTTKAINSCHT 60
OY 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
OY 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSVQHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 181 KIDNYLKLKCRIRIHNHNC 199
DB 181 KIDNYLKLKCRIRIHNHNC 199
RESULT 6
ID ABU09878 standard; protein; 199 AA.
XX
XX ABU09878;
XX
XX AC ABU09878;
XX
XX DT 11-AUG-2003 (first entry)
XX
XX Human prolactin G129R substitution mutant.
XX
XX Human prolactin; antagonist; cancer cell proliferation; breast cancer;
XX prostate cancer; cellular apoptosis; mutant; mutein.
XX
XX Homo sapiens.
XX
XX Synthetic.

XX Key Location/Qualifiers
FH MISC-difference 129
FT /note= "wild-type Gly substituted by Arg"
XX US2003022833-A1.
XX 30-JAN-2003.
XX PD
XX PF 08-MAY-2002; 2002US-00140293.
XX PR 13-MAY-1998; 98US-0085228P.
XX PR 05-FEB-1999; 99US-00246041.
XX (GREE-) GREENVILLE HOSPITAL SYSTEM.
XX PA
XX PI Chen WY, Wagner TE;
XX WPI; 2003-438990/41.
XX Use of a variant of human prolactin for inhibiting the proliferation of
XX breast and prostate cancer cells.
XX
XX Example 7; Page; 68pp; English.
XX
XX The invention relates to a method of inhibiting the proliferation of
XX breast and prostate cancer cells expressing a prolactin receptor which
XX involves exposing the cell to a variant of human prolactin having a
XX substitution of the glycine at position 129, or a cell-free truncated
XX prolactin receptor. The method is useful for inhibiting the proliferation
XX of a breast cancer and prostate cancer cells; and for inducing cellular
XX apoptosis in a cell expressing the prolactin receptor. The human
XX prolactin variant in combination with an anti-estrogen induces a
XX synergistic inhibitory effect on cell proliferation. The present sequence
XX represents the amino acid sequence of human prolactin G129R substitution
XX mutant. Note: The present sequence is not shown in the specification but
XX is derived from the human wild-type prolactin sequence given in figure 10
XX (see Abn09846)
XX
XX Sequence 199 AA;
SQ
Query Match 99.3%; Score 1035; DB 6; Length 199;
Best Local Similarity 99.0%; Pred. No. 1.8e-92;
Matches 197; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICPGGAARCOVTLRLDLPRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
DB 1 LPICPGGAARCOVTLRLDLPRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
QY 61 SSILATPEDEKQAOQNNQKDFLSILVSLRSWNEPLVHLVTEVRGMOEAPALISKAVERE 120
DB 61 SSILATPEDEKQAOQNNQKDFLSILVSLRSWNEPLVHLVTEVRGMOEAPALISKAVERE 120
QY 121 EQTKRLLEEMELIVSQVHPETKENETYPWVGSLQMDDESRSLSAAYNLLHCLRRDSH 180
DB 121 EQTKRLLEEMELIVSQVHPETKENETYPWVGSLQMDDESRSLSAAYNLLHCLRRDSH 180
QY 181 KIDNYLKLKLCRIIHNHNC 199
DB 181 KIDNYLKLKLCRIIHNHNC 199
RESULT 7
ID ADO38214 standard; protein; 199 AA.
XX ADO38214;
XX AC
XX DT 23-SEP-2004 (first entry)
XX XX
XX DE Modified human prolactin protein.
XX XX
XX cytostatic; prolactin; antagonist; prolactin receptor; mutation; cancer;

KW breast cancer; leukaemia; lactation; prolactinoma;
KW hyperprolactinemic condition; human.
XX Homo sapiens.
XX WO2004054516-A2.
XX PN
XX PD 01-JUL-2004.
XX PF 12-DEC-2003; 2003WO-US039646.
XX PR 13-DEC-2002; 2002US-0433370P.
XX PA (OHS) UNIV OHIO STATE.
XX PI Brooks CL, Peterson FC;
XX WPI; 2004-487994/46.
XX DR
XX PT New modified human prolactin molecule exhibiting antagonist activity,
XX binding to prolactin receptor through site 1, and having diminished
XX PT binding through site 2, useful for treating cancer such as breast cancer
XX or leukemia.
XX PS
XX Claim 1; Page 73; 95pp; English.
XX
XX The invention relates to a modified human prolactin molecule (I)
XX exhibiting antagonist activity, capable of binding to prolactin receptor
XX through site 1, having greatly diminished binding through site 2, where
XX (I) comprises one or more mutation in the region that contains amino
XX acid residues 41-57, 94-110 or 160-173 of the human prolactin, and the
XX mutation is by deletions, substitutions, and insertions. (I) is useful
XX for treating cancer, which involves administering (I), where the cancer
XX is breast cancer or leukaemia. (I) is useful for reducing or suppressing
XX lactation, for inhibiting or decreasing the activity of endogenous
XX prolactins, and for treating or preventing prolactinoma
XX (hyperprolactinemic condition). (I) exhibits antagonist activity, and
XX binds to prolactin receptor through site 1 not through site 2. This
XX sequence corresponds to the claimed modified human prolactin of the
XX invention.
XX
XX Sequence 199 AA;
SQ
Query Match 99.3%; Score 1035; DB 8; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICPGGAARCOVTLRLDLPRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
DB 1 LPICPGGAARCOVTLRLDLPRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
QY 61 SSILATPEDEKQAOQNNQKDFLSILVSLRSWNEPLVHLVTEVRGMOEAPALISKAVERE 120
DB 61 SSILATPEDEKQAOQNNQKDFLSILVSLRSWNEPLVHLVTEVRGMOEAPALISKAVERE 120
QY 121 EQTKRLLEEMELIVSQVHPETKENETYPWVGSLQMDDESRSLSAAYNLLHCLRRDSH 180
DB 121 EQTKRLLEEMELIVSQVHPETKENETYPWVGSLQMDDESRSLSAAYNLLHCLRRDSH 180
QY 181 KIDNYLKLKLCRIIHNHNC 199
DB 181 KIDNYLKLKLCRIIHNHNC 199
RESULT 8
ID ADR90662 standard; protein; 199 AA.
XX ADR90662;
XX AC
XX DT 02-DEC-2004 (first entry)
XX XX
XX DE Human prolactin partial protein.

XX dipeptidyl peptidase cleavage; antidiabetic; anorectic; antiinflammatory;
KM antiarteriosclerotic; tranquiliser; anticonvulsant; hypnotic;
KM gene therapy; metabolic disease; diabetes; obesity; inflammation;
KM atherosclerosis; nervous system disorder; anxiety; seizures;
KM sleep disorder; prolactin; human.
OS Homo sapiens.
XX WO2004078777-A2.
XX 16-SEP-2004.
XX PD
XX 04-MAR-2004; 2004WO-US006462.
XX PF
XX 04-MAR-2003; 2003US-00378094.
XX PR 28-AUG-2003; 2003WO-US026818.
XX PA (BIOR-) BIOREXIS PHARM CORP.
XX PI Sadeghi H, Prior CP, Balance DJ;
XX DR WPI; 2004-653689/63.
XX PS
XX PT New modified polypeptides that are resistant to dipeptidyl peptidase
PT cleavage, useful for treating metabolic diseases (e.g. diabetes or
PT obesity), inflammation, atherosclerosis or nervous system disorders (e.g.
PT anxiety).
XX
XX Disclosure; SEQ ID NO 43; 125pp; English.
XX
XX This invention relates to a novel polypeptide molecule modified to
XX contain at least one additional amino acid at the N-terminal end that
XX substantially protects the polypeptide molecule from dipeptidyl peptidase
XX cleavage, where the modified polypeptide substantially retains
XX polypeptide activity. The invention may be useful for the production of
XX compounds with an antidiabetic, anorectic, antiinflammatory,
XX antiarteriosclerotic, tranquiliser, anticonvulsant or hypnotic activity.
XX In addition, the invention may be useful for gene therapy. The compounds
XX may be useful for treating metabolic diseases (for example diabetes or
XX obesity), inflammation, atherosclerosis and nervous system disorders,
XX such as anxiety, seizures and sleep disorders. The present sequence is
XX that of a polypeptide derived from a human protein which is related to
XX the invention.
XX
XX Sequence 199 AA;
SQ
Query Match 99.3%; Score 1035; DB 8; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 LPICGGAARCCVLTARDLPDRAVVISHTYHNISMSFSEFDRKRYHGGFTTKAINSCHT 60
DB 1 LPICGGAARCCVLTARDLPDRAVVISHTYHNISMSFSEFDRKRYHGGFTTKAINSCHT 60
OY 61 SSLAPBEKEAQQONNOQDFLSIYSIRSNWEPYHLYVTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLAPBEKEAQQONNOQDFLSIYSIRSNWEPYHLYVTEVRGMOEAPAILSKAVEIE 120
OY 121 EOTKLLERMELIVSQVPEETKENETIPVWSGLPSLQMADEBSRLSAYYNLLHCRLRDSH 180
DB 121 EOTKLLERMELIVSQVPEETKENETIPVWSGLPSLQMADEBSRLSAYYNLLHCRLRDSH 180
OY 181 KIDNYLKILKCRIRIHNNNC 199
DB 181 KIDNYLKILKCRIRIHNNNC 199
RESULT 9
AAW92258
ID AAW92258 standard; protein; 200 AA.
XX
XX AAW92258;

XX 08-JUN-1999 (first entry)
DT
XX
XX Human anti-angiogenic peptide hPRL Met-1Cys199.
DE
XX
XX Human; anti-angiogenic; prolactin; placental lactogen; hPL; angiogenesis;
KM growth hormone; hGH; hGH-V; capillary endothelial cell proliferation;
KM placental vascularisation; pregnancy; treatment; angiogenic disease;
KM tumour; inhibitor; malignant; angiofibroma; arteriovenous malformation;
KM arthritis; atherosclerotic plaques; corneal graft neovascularisation;
KM wound healing; proliferative retinopathy; macular degeneration; trachoma;
KM granululation; glaucoma; ocular; uveitis; fracture; Obler-Weber syndrome;
KM psoriasis; fibroplasia; scleroderma; Kaposi's sarcoma; vascular adhesion;
KM ulcer; leukaemia; reproductive disorder; contraceptive agent;
KM gene therapy; pre-eclampsia; intrauterine growth retardation;
KM placental dysfunction.
XX
XX Homo sapiens.
XX OS
XX WO9851323-A1.
XX PN
XX 19-NOV-1998.
XX PD
XX 12-MAY-1998; 98WO-US009691.
XX PE
XX 13-MAY-1997; 97US-0046394P.
XX PR
XX (REGC) UNIV CALIFORNIA.
XX PA
XX Weiner RJ, Martial JA, Struman I, Taylor R;
XX PI
XX WPI; 1999-045192/04.
XX DR
XX N-PSDB; AAX01694.
XX
XX New anti-angiogenic peptides - comprise N-terminal fragments of human
XX placental lactogen, human growth hormone, growth hormone variant or human
XX prolactin.
XX
XX Example 3; Page 43-44; 87pp; English.
XX
XX This invention describes novel human anti-angiogenic peptides derived
XX from 10 to 150 consecutive amino acids selected from the N-terminal end
XX of human placental lactogen (hPL), human growth hormone (hGH), growth
XX hormone variant (hGH-V), or human prolactin. Such peptides (i) inhibit
XX capillary endothelial cell proliferation and organisation (ii) inhibit
XX angiogenesis in chick chorioallantoic membrane and (iii) binds to at
XX least one specific receptor which does not bind an intact full length
XX hGH, hPL, prolactin or hGH-V. The invention also describes a method for
XX diagnosing a probable abnormality of placental vascularisation during
XX pregnancy. The peptides can be used for treating an angiogenic disease in
XX a subject, for inhibiting tumour formation or growth in a patient or for
XX modulating vascularisation of a patient's placenta. In particular, the
XX peptides can be used for preventing or treating e.g. malignant tumours,
XX angiofibroma, arteriovenous malformation, arthritic such as rheumatoid
XX arthritis, atherosclerotic plaques, corneal graft neovascularisation,
XX delayed wound healing, proliferative retinopathy such as diabetic
XX retinopathy, macular degeneration, granulation such as those occurring
XX in haemophilic joints, inappropriate vascularisation in wound healing
XX such as hypertrophic scars or keloid scars, neovascular glaucoma, ocular
XX tumour, uveitis, non-union fractures, Obler-Weber syndrome, psoriasis,
XX pyogenic glaucoma, retrolental fibroplasia, scleroderma, solid tumours,
XX Kaposi's sarcoma, trachoma, vascular adhesions, chronic varicose ulcers,
XX leukaemia, and reproductive disorders such as follicular and luteal cysts
XX and chorioncarcinoma. They can also be used as contraceptive agents, DNA
XX encoding the peptides can be used in gene therapy. The measurement of
XX abnormal levels of N-terminal fragments of hGH, hGH-V, prolactin or hPL
XX can be used in assays for impairment of vascular development associated
XX with pre-eclampsia, intrauterine growth retardation, and placental
XX dysfunction
XX
XX Sequence 200 AA;
SQ
Query Match 99.3%; Score 1035; DB 2; Length 200;

Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
OY 1 LPICGGAARCCVTLRDLFDRAVVLSHYTHNLSSMFSEFDRKRYTHGRGFIITKAINSCHT 60
DB 2 LPICGGAARCCVTLRDLFDRAVVLSHYTHNLSSMFSEFDRKRYTHGRGFIITKAINSCHT 61
OY 61 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWPEPLVHLVTEVRGMOEAPBALISKAVEIE 120
DB 62 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWPEPLVHLVTEVRGMOEAPBALISKAVEIE 121
OY 121 EOTKLLERMELIVSQVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 180
DB 122 EOTKLLERMELIVSQVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 181
OY 181 KIDNYLKLLKCRRIHNNNC 199
DB 182 KIDNYLKLLKCRRIHNNNC 200
```

RESULT 10

ADQ38217
ID ADQ38217 standard; protein; 200 AA.

AC ADQ38217;

DT 23-SEP-2004 (first entry)

DE Recombinant mature human prolactin protein.

KW cytostatic; prolactin; antagonist; prolactin receptor; mutation; cancer;

KM breast cancer; leukaemia; lactation; prolactinoma;

KW hyperprolactinemic condition; human.

OS Homo sapiens.

PN WO2004054516-A2.

PD 01-JUL-2004.

PF 12-DEC-2003; 2003WO-US039646.

PR 13-DEC-2002; 2002US-043370P.

PA (OHIS) UNIV OHIO STATE.

PI Brooks CL, Peterson FC;

DR WPI; 2004-487994/46.

PT New modified human prolactin molecule exhibiting antagonist activity,
PT binding to prolactin receptor through site 1, and having diminished
PT binding through site 2, useful for treating cancer such as breast cancer
PT or leukemia.

PS Disclosure; Fig 5; 95pp; English.

CC The invention relates to a modified human prolactin molecule (I)
CC exhibiting antagonist activity, capable of binding to prolactin receptor
CC through site 1, having greatly diminished binding through site 2, where
CC (I) comprises one or more mutation in the region that contains amino
CC acids residues 41-57, 94-110 or 160-173 of the human prolactin, and the
CC mutation is by deletions, substitutions, and insertions. (I) is useful
CC for treating cancer, which involves administering (I), where the cancer
CC is breast cancer or leukemia. (I) is useful for reducing or suppressing
CC lactation, for inhibiting or decreasing the activity of endogenous
CC prolactins, and for treating or preventing prolactinoma
CC (hyperprolactinemic condition). (I) exhibits antagonist activity, and
CC binds to prolactin receptor through site 1 not through site 2. This
CC sequence corresponds to the mature prolactin protein minus the signal
CC sequence but with a Met residue attached at the N-terminus.

XX Sequence 200 AA;

Query Match 99.3%; Score 1035; DB 8; Length 200;

Best Local Similarity 99.5%; Pred. No. 1.8e-92;

Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
OY 1 LPICGGAARCCVTLRDLFDRAVVLSHYTHNLSSMFSEFDRKRYTHGRGFIITKAINSCHT 60
DB 2 LPICGGAARCCVTLRDLFDRAVVLSHYTHNLSSMFSEFDRKRYTHGRGFIITKAINSCHT 61
OY 61 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWPEPLVHLVTEVRGMOEAPBALISKAVEIE 120
DB 62 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWPEPLVHLVTEVRGMOEAPBALISKAVEIE 121
OY 121 EOTKLLERMELIVSQVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 180
DB 122 EOTKLLERMELIVSQVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 181
OY 181 KIDNYLKLLKCRRIHNNNC 199
DB 182 KIDNYLKLLKCRRIHNNNC 200
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RESULT 11

AAR05231
ID AAR05231 standard; protein; 227 AA.

AC AAR05231;

DT 25-MAR-2003 (revised)

DT 03-AUG-1990 (first entry)

DE AA sequence of human prolactin (HP) as encoded by recombinant DNA.

KW Human prolactin (HP); plasmid pTP100; plasmid pDR720; plasmid pLP100.

KM Homo sapiens.

OS Homo sapiens.

PN JP02000445-A.

PD 05-JAN-1990.

PF 14-DEC-1988; 88JP-00315317.

PR 25-DEC-1987; 87JP-00331244.

PA (SHIK-) SHIKISHIMA BOSEKI K.

DR WPI; 1990-047987/07.

DR N-PSDB; AAO93293.

PT Human prolactin producing recombinant DNA - in which promoter, Shine-
PT Dalgarno sequence and translation initiation codon are integrated.

PS Disclosure; Fig 1; 15pp; Japanese.

CC Also new are bacteria (E. coli) expressing it which contain its encoding
CC DNA, and the prodn. of it by their culture. Large amts. of it can be
CC produced recombinantly. (Updated on 25-MAR-2003 to correct PF field.)

CC (Updated on 25-MAR-2003 to correct PR field.)

XX Sequence 227 AA;

XX Query Match 99.3%; Score 1035; DB 2; Length 227;

XX Best Local Similarity 99.5%; Pred. No. 2.1e-92;

XX Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
OY 1 LPICGGAARCCVTLRDLFDRAVVLSHYTHNLSSMFSEFDRKRYTHGRGFIITKAINSCHT 60
DB 29 LPICGGAARCCVTLRDLFDRAVVLSHYTHNLSSMFSEFDRKRYTHGRGFIITKAINSCHT 88
OY 61 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWPEPLVHLVTEVRGMOEAPBALISKAVEIE 120
DB 89 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWPEPLVHLVTEVRGMOEAPBALISKAVEIE 148
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OY 121 EQTKRLERMLIVSQVHPTKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 180
DB 149 EQTKRLLEGMLIVSQVHPTKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 208
OY 181 KIDNYLKLKCRITIHNNNC 199
DB 209 KIDNYLKLKCRITIHNNNC 227

RESULT 12
AAG78336
ID AAG78336 standard; protein; 227 AA.
AC AAG78336;
DT 22-JAN-2002 (first entry)
DE Human prolactin (hPRL).
KW Breast cancer; apoptosis inducer; positive immunomodulator domain;
KW immune response; cytotoxic; T lymphocyte cytotoxicity enhancer;
KW STAT phosphorylation inhibitor; prolactin antagonist; interleukin-2;
KW IL-2; interferon gamma; IFN gamma; IL-12.
XX
OS Homo sapiens.
PN MO200170985-A2.
XX
PD 27-SEP-2001.
XX
PF 23-MAR-2001; 2001WO-US009284.
XX
PR 23-MAR-2000; 2000US-0191457P.
XX
PA (GREG-) GREENVILLE HOSPITAL SYSTEM.
PI Chen WY, Wagner TE;
DR WPI; 2001-611504/70.
XX
PT Novel polypeptide for treating cancer comprises a receptor antagonizing
PT domain which also functions as an apoptosis domain, such as the prolactin
PT antagonist domain, and a positive immunomodulator domain.
XX
PS Claim 20; Page 47; 47pp; English.
XX
CC This sequence represents human prolactin (hPRL), which may be used to create
CC the receptor antagonizing domain of the protein of the invention. The
CC specification describes a novel protein comprising a receptor
CC antagonizing domain (having a fully defined sequence as given in the
CC specification, or its conservative variant) and a positive
CC immunomodulator domain. The object of the invention is to provide a
CC medicament that is capable of interfering with the prolactin signalling
CC of a cancer cell, a pharmaceutical composition comprising the protein,
CC and a carrier vehicle is described. A receptor antagonizing domain is a
CC ligand that specifically binds to a receptor associated with a disorder
CC like cancer, and can be an apoptosis-promoting domain. A positive
CC immunomodulator domain is one that augments an immune response, preferably
CC against the target cell, e.g. interleukin (IL)-2, interleukin (IL)-12 and
CC interferon (IFN) gamma. The protein has cytostatic activity and is useful
CC for treating cancer in a patient. The protein is an apoptosis inducer, a
CC T lymphocyte cytotoxicity enhancer, a signal transducer and activator of
CC transcription (STAT) phosphorylation inhibitor and a prolactin
CC antagonist. The targeted therapy approach is designed to provide
CC dramatically decreased systemic concentrations of positive
CC immunomodulator domain, e.g. IL-2, thereby reducing its toxicity in vivo
XX
SQ Sequence 227 AA;

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OY 1 LPICPGGAARCOYTLRDLFPRAVVLSHYIHNLSSMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 29 LPICPGGAARCOYTLRDLFPRAVVLSHYIHNLSSMFSEFDKRYTHGRGFTTKAINSCHT 88
OY 61 SSLATPEDEKQAOQOMQKDFLSLIVSLRSWNEPLYHLVTEVRGMOAPEALISKAVEIE 120
DB 89 SSLATPEDEKQAOQOMQKDFLSLIVSLRSWNEPLYHLVTEVRGMOAPEALISKAVEIE 148
OY 121 EQTKRLERMLIVSQVHPTKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 180
DB 149 EQTKRLLEGMLIVSQVHPTKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 208
OY 181 KIDNYLKLKCRITIHNNNC 199
DB 209 KIDNYLKLKCRITIHNNNC 227

RESULT 13
AAU28057
ID AAU28057 standard; protein; 227 AA.
AC AAU28057;
DT 18-DEC-2001 (first entry)
DE Novel human secretory protein, Seq ID No 226.
XX
DE Human, secreted protein; arthritis; Crohn's disease; sepsis; shock;
KW ischaemia-reperfusion injury; haematopoiesis; cancer; neuropathy;
KW transgenic animal; Alzheimer's disease; Parkinson's disease; burn;
KW amyotrophic lateral sclerosis; platelet disorder; thrombocytopenia;
KW ulcer; osteoporosis; bone degenerative disorder; periodontal disease;
KW gut protection; lung; liver fibrosis; immune deficiency; infection;
KW severe combined immunodeficiency; SCID; autoimmune disorder; allergy;
KW multiple sclerosis; rheumatoid arthritis; diabetes mellitus; asthma;
KW fertility; analgesic; pain; antigen.
XX
OS Homo sapiens.
PN MO200166689-A2.
XX
PD 13-SEP-2001.
XX
PF 05-MAR-2001; 2001WO-US004942.
XX
PR 07-MAR-2000; 2000US-00519705.
PR 19-MAY-2000; 2000US-00574454.
PR 17-JUN-2000; 2000US-00596193.
PR 14-JUL-2000; 2000US-00616847.
PR 19-SEP-2000; 2000US-00665363.
PR 20-OCT-2000; 2000US-00693267.
XX
PA (HYSE-) HYSEQ INC.
PI Tang YT, Liu C, Asundi V, Xu C, Wehrman T, Ren F, Ma Y, Zhou P;
PI Zhao QA, Yang Y, Drmanac RT, Zhang J, Chen R, Xue AJ, Wang J;
DR WPI; 2001-589934/66.
XX
PR N-PSDB; AAS44957.
XX
PT Novel polypeptides and nucleic acids obtained from cDNA libraries
PT prepared from various human tissues, for diagnosis and treatment of
PT cancer, neurological, inflammatory, and autoimmune disorders.
XX
PS Example 3; SEQ ID NO 226; 107pp; English.
XX
CC The invention relates to novel isolated human secreted polypeptides (I)
CC and polynucleotides (II). (I) and (II) are useful for treating
CC inflammatory conditions such as arthritis, nephritis, Crohn's disease,
CC ischaemia-reperfusion injury, shock, sepsis, immune responses, and is
CC involved in increasing haematopoiesis, stem cell survival, bone growth
CC and remodeling. (I), (II) and modulators of (II) are useful for

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prophylaxis or treatment of one or more cancers. (ii) is also useful for creating transgenic animals useful for studying the in vivo activities of the polypeptide as well as for studying modulators of the polypeptides. (i) induces the proliferation of neural cells and regeneration of nerve and brain tissue and is useful for the treatment of central and peripheral nervous system diseases and neuropathies, such as Alzheimer's, Parkinson's disease, Huntington's disease, and amyotrophic lateral sclerosis. In addition, (i) is involved in chemotactic or chemokinetic activity, regulation of haematopoiesis and is useful for treating myeloid or lymphoid cell disorders, platelet disorders such as thrombocytopenia and for regeneration of bone, cartilage, tendon, ligament and/or nerve tissue growth, and in tissue repair, healing of burns, incisions, ulcers, for treating osteoporosis, osteoarthritis, bone degenerative disorders, or periodontal disease. Furthermore, (i) is also useful for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues, various immune deficiencies and disorders including severe combined immunodeficiency (SCID), bacterial or fungal infections, autoimmune disorders e.g. multiple sclerosis, rheumatoid arthritis, diabetes mellitus, myasthenia gravis, allergic reactions and conditions, such as asthma or other respiratory problems. In addition, (i) affects biorhythms or circadian cycles of rhythms, fertility, metabolism, catabolism, anabolism, storage or elimination of dietary fat, lipid, protein, carbohydrate, vitamins, minerals, provides anaesthetic effects or other pain reducing effects, immunoglobulin like activity and can act as an antigen in a vaccine composition to raise an immune response. AAU8020-AAU28395 represent novel human secreted protein amino acid sequences of the invention

Sequence 227 AA;

Query Match 99.3%; Score 1035; DB 4; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.1e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPIPCGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 60
DB 29 LPIPCGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 88
QY 61 SSILATPEDEKQAOQNNQKDFLSIVLSIRSWNEPLVHLTVGVGMQAEPAIISKAVEIE 120
DB 89 SSILATPEDEKQAOQNNQKDFLSIVLSIRSWNEPLVHLTVGVGMQAEPAIISKAVEIE 148
QY 121 EOTKRLLEGMELIVSOVHPETKENETYPWVGSLPSIQMADEBSRLSAYVNLHCLRRDSH 180
DB 149 EOTKRLLEGMELIVSOVHPETKENETYPWVGSLPSIQMADEBSRLSAYVNLHCLRRDSH 208
QY 181 KIDNYLKLKCRTHHNNC 199
DB 209 KIDNYLKLKCRTHHNNC 227

RESULT 14

ADD48810 ADD48810 standard; protein; 227 AA.

AC ADD48810;

DT 02-DEC-2004 (revised)

DT 29-JAN-2004 (first entry)

DE Human Protein CAA38264, SEQ ID NO 14520.

XX Human; pain; neuronal tissue; gene therapy;
XX spinal segmental nerve injury; chronic constriction injury; CCI;
XX epared nerve injury; SNI; Chung.

OS Homo sapiens.
OS Unidentified.

PN MO2003016475-AA.

XX 27-FEB-2003.

XX

PF 14-AUG-2002; 2002MO-US025765.

XX 14-AUG-2001; 2001US-0312147P.

PR 01-NOV-2001; 2001US-0346382P.

PR 26-NOV-2001; 2001US-0333347P.

XX (GENO) GEN HOSPITAL CORP.

PA (FARB) BAYER AG.

PI Woolf C, D'urso D, Befort K, Costigan M;

DR MPI; 2003-268312/26.

DB GENBANK; CAA38264.

PT New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.

XX Example 1; Page; 1017p; English.

XX The invention discloses a composition comprising two or more isolated rat
XX or human polynucleotides or a polynucleotide which represents a fragment,
XX derivative or allelic variation of the nucleic acid sequence. Also
XX claimed are a vector comprising the novel polynucleotide, a host cell
XX comprising the vector, a method for identifying a nucleotide sequence
XX which is differentially regulated in an animal subjected to pain and a
XX kit to perform the method, an array, a method for identifying an agent
XX that increases or decreases the expression of the polynucleotide sequence
XX that is differentially expressed in neuronal tissue of a first animal
XX subjected to pain, a method for identifying a compound which regulates
XX the expression of a polynucleotide sequence which is differentially
XX expressed in an animal subjected to pain, a method for identifying a
XX compound that regulates the activity of one or more of the
XX polynucleotides, a method for producing a pharmaceutical composition, a
XX method for identifying a compound or small molecule that regulates the
XX activity in an animal of one or more of the polypeptides given in the
XX specification, a method for identifying a compound useful in treating
XX pain and a pharmaceutical composition comprising the one or more
XX polypeptides or their antibodies. The polynucleotide or the compound that
XX modulates its activity is useful for preparing a medicament for treating
XX pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
XX injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
XX therapy). The sequence presented is a human protein (described in Table 3
XX of the specification) which is differentially expressed during pain.
XX Note: The sequence data for this patent did not form part of the printed
XX specification, but was obtained in electronic form directly from Wiro at
XX ftp.wipo.int/pub/published_pct_sequences.

Sequence 227 AA;

Query Match 99.3%; Score 1035; DB 7; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.1e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPIPCGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 60
DB 29 LPIPCGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 88
QY 61 SSILATPEDEKQAOQNNQKDFLSIVLSIRSWNEPLVHLTVGVGMQAEPAIISKAVEIE 120
DB 89 SSILATPEDEKQAOQNNQKDFLSIVLSIRSWNEPLVHLTVGVGMQAEPAIISKAVEIE 148
QY 121 EOTKRLLEGMELIVSOVHPETKENETYPWVGSLPSIQMADEBSRLSAYVNLHCLRRDSH 180
DB 149 EOTKRLLEGMELIVSOVHPETKENETYPWVGSLPSIQMADEBSRLSAYVNLHCLRRDSH 208
QY 181 KIDNYLKLKCRTHHNNC 199
DB 209 KIDNYLKLKCRTHHNNC 227

RESULT 15

AD038216 AD038216 standard; protein; 227 AA.

XX ADO38216;
 AC 23-SEP-2004 (first entry)
 XX
 DT
 XX
 DE Precursor human prolactin protein.
 XX
 KW cytosolic; prolactin; antagonist; prolactin receptor; mutation; cancer;
 KM breast cancer; leukaemia; lactation; prolactinoma;
 KM hyperprolactinemic condition.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Peptide 1..28
 FT /note= "signal peptide"
 FT Protein 29..227
 FT /note= "mature protein"
 XX
 FN WO2004054516-A2.
 XX
 PD 01-JUL-2004.
 XX
 PD 12-DEC-2003; 2003WO-US039646.
 XX
 PF 13-DEC-2002; 2002US-0433370P.
 XX
 PR (OHIS) UNIV OHIO STATE.
 XX
 PA Brooks CL, Peterson FC;
 XX
 PI WPI; 2004-487994/46.
 XX
 DR N-PSDB; ADO38215.
 XX
 DR GENBANK; NF_000939.
 XX
 PT New modified human prolactin molecule exhibiting antagonist activity,
 PT binding to prolactin receptor through site 1, and having diminished
 PT binding through site 2, useful for treating cancer such as breast cancer
 PT or leukemia.
 XX
 PS Disclosure; Fig 4; 95pp; English.
 XX
 CC The invention relates to a modified human prolactin molecule (I)
 CC exhibiting antagonist activity, capable of binding to prolactin receptor
 CC through site 1, having greatly diminished binding through site 2, where
 CC (I) comprises one or more mutation in the region that contains amino
 CC acids residues 41-57, 94-110 or 160-173 of the human prolactin, and the
 CC mutation is by deletions, substitutions, and insertions. (I) is useful
 CC for treating cancer, which involves administering (I), where the cancer
 CC is breast cancer or leukaemia. (I) is useful for reducing or suppressing
 CC lactation, for inhibiting or decreasing the activity of endogenous
 CC prolactin, and for treating or preventing prolactinoma
 CC (hyperprolactinemic condition). (I) exhibits antagonist activity, and
 CC binds to prolactin receptor through site 1 not through site 2. This
 CC sequence corresponds to the precursor human prolactin protein.
 XX
 SQ Sequence 227 AA;
 Query Match 99.3%; Score 1035; DB 8; Length 227;
 Best Local Similarity 99.5%; Pred. No. 2.1e-92;
 Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 LPICGGAARCCVTLRDLPDRAVLSHYIHNLSSMFSEFDRKRYTHGRGFTTKAINSCHT 60
 DB 29 LPICGGAARCCVTLRDLPDRAVLSHYIHNLSSMFSEFDRKRYTHGRGFTTKAINSCHT 88
 QY 61 SSLATPEKDEKQAOQNNQKDFSLIVSILRSWNEPIYHLVTEYRGMOEAPBALSKAVEIE 120
 DB 89 SSLATPEKDEKQAOQNNQKDFSLIVSILRSWNEPIYHLVTEYRGMOEAPBALSKAVEIE 148
 QY 121 EOTKRLLEMEELIVSQVHPETKENEIPYWSGLPSLOMADEBSRLSAYYNLHCLRRDSH 180
 DB 149 EOTKRLLEMEELIVSQVHPETKENEIPYWSGLPSLOMADEBSRLSAYYNLHCLRRDSH 208

QY 181 KIDNYLKLKCRTHNNNC 199
 DB 209 KIDNYLKLKCRTHNNNC 227

Search completed: January 6, 2006, 14:28:13
 Job time : 198 secs

GenCore version 5.1.6
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OM protein - protein search, using SW model

Run on: January 6, 2006, 14:21:29 ; Search time 43 Seconds
(without alignments)
445,282 Million cell updates/sec

Title: US-09-815-306a-34

Perfect score: 1042
Sequence: 1 LPICPGAGARCVTLRLD.....HKIDNYLKLKCRITHHNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1035	99.3	227	1	LCHU
2	1033	98.2	228	2	A61402
3	879	84.4	199	2	S15131
4	869	83.4	229	1	LCPG
5	868	83.3	199	2	LCGO
6	859	82.4	229	2	JC4631
7	853	81.9	199	2	PN0128
8	789	75.7	229	1	LCBO
9	788	75.6	229	1	LCSH
10	788	75.6	229	2	I83982
11	782.5	75.1	198	1	A60620
12	764	73.3	175	2	S18882
13	762	73.1	229	2	A60972
14	746	71.6	229	2	A61133
15	725	70.0	199	2	JS0430
16	682.5	65.5	207	2	A60969
17	659	63.2	226	1	LCRT
18	649	63.2	226	2	A49159
19	613	58.8	228	1	LCMS
20	593.5	57.0	200	2	S34604
21	486	46.6	134	2	IS1233
22	460	44.1	226	2	A37930
23	456.5	43.8	221	2	A41407
24	435	41.7	236	2	A40143
25	416.5	40.0	238	2	B36284
26	415.5	39.9	267	2	A34078
27	409.5	39.3	222	2	A26489
28	394.5	37.9	221	2	A25951
29	387	37.1	238	2	A31417

ALIGNMENTS

30	363	34.8	239	2	S04966	prolactin-like pro
31	362.5	34.8	223	2	A49160	placental lactogen
32	362	34.7	234	2	A40919	prolactin-like pro
33	361	34.6	237	2	S14722	hypothetical prote
34	359.5	34.5	244	2	A22722	proliferin-related
35	359	34.5	224	2	A40062	lactogen I precurs
36	350	33.6	213	2	B34078	prolactin-related
37	332.5	31.9	230	2	A37399	lactogen I precurs
38	315.5	30.3	227	2	A24911	prolactin-like pro
39	308	29.6	224	2	A05086	proliferin 1 precu
40	308	29.6	224	2	S48671	proliferin 1 mouse
41	307	29.5	224	2	S05648	proliferin 3 - mou
42	304	29.2	209	2	S30541	prolactin precurs
43	302.5	29.0	212	2	IS1275	prolactin precurs
44	302	29.0	224	2	A23159	proliferin 2 precu
45	281.5	27.0	239	2	A46603	decidual prolactin

RESULT 1

LCHU

prolactin precursor [validated] - human

C.Species: Homo sapiens (man)

C.Date: 30-Jun-1979 #sequence revision 23-Oct-1981 #text change 09-Jul-2004

C.Accession: A90998; A92318; A28867; A92762; A92177; A01505

R.Trung, A.T.; Duez, C.; Belayev, A.; Renard, A.; Picet, R.; Bell, G.I.; Martial, J.A.

EMBO J. 3, 429-437, 1984

A.Title: Isolation and characterization of the human prolactin gene.

A.Reference number: A90998; MUID:84182507; PMID:6325171

A.Accession: A90998

A.Molecule type: DNA

A.Residues: 1-227 <TRU>

A.Cross-references: UNIPROT:P01236; UNIPARC:UPI0000001C13

R.Cooke, N.B.; Colt, D.; Shine, J.; Baxter, J.D.; Martial, J.A.

J. Biol. Chem. 256, 4007-4016, 1981

A.Title: Human prolactin: cDNA structural analysis and evolutionary comparisons.

A.Reference number: A92318; MUID:81168179; PMID:6260780

A.Accession: A92318

A.Molecule type: mRNA

A.Residues: 1-227 <COO>

A.Cross-references: UNIPARC:UPI0000001C13; GB:V00566; GB:J00299; NID:G34210; PIDN:CAA23

R.Takahashi, H.; Nabeshima, Y.; Nabeshima, Y.; Ogata, K.; Takeuchi, S.

J. Biochem. 95, 1491-1499, 1984

A.Title: Molecular cloning and nucleotide sequence of DNA complementary to human decidu

A.Reference number: A28867; MUID:84264464; PMID:6146607

A.Accession: A28867

A.Molecule type: mRNA

A.Residues: 1-205, 'H', 207-227 <TK>

A.Cross-references: UNIPARC:UPI00000173453; EMBL:M29386

A.Note: the authors translated the codon CAT for residue 206 as Asp

R.Merzvetov, N.P.; Golovin, S.Y.; Zelenin, S.M.; Morozova, T.V.; Karginov, V.A.; Chekh

Biorg. Khim. 13, 1687-1690, 1987

A>Title: Synthesis, cloning and sequencing of cDNA complementary to mRNA of prolactin f

A.Reference number: PN0089; MUID:88221681; PMID:3450284

A.Accession: PN0089

A.Molecule type: mRNA

A.Residues: 45-227 <MER>

A.Cross-references: UNIPARC:UPI0000173454

A.Experimental source: pituitary gland

A>Note: the authors translated the codon AAC for residue 15 as Asp

R.Shome, B.; Parlow, A.F.

J. Clin. Endocrinol. Metab. 45, 1112-1115, 1977

A>Title: Human pituitary prolactin (hPRL): the entire linear amino acid sequence.

A.Reference number: A92762; MUID:78046207; PMID:925136

A.Accession: A92762

A.Molecule type: protein

A.Residues: 29-109, 'VS', 112, 'L', 115-132, 'X', 134-171, 'D', 173-189, 'SF', 192-227 <SHO>

A.Cross-references: UNIPARC:UPI0000173455; UNIPARC:UPI0000173456

R.Jacobs, J.W.; Niall, H.D.

J. Biol. Chem. 250, 3629-3636, 1975

A>Title: High sensitivity automated sequence determination of polypeptides.

```
A:Reference number: A92177; MUID:75151509; PMID:1126929
A:Accession: A92177
A:Molecule type: Protein
A:Residues: 29-52, 'L' <JAC>
A:Cross-references: UNIPARC:UPI0000173457
C:Genetics:
A:Gene: GDB:PRL
A:Cross-references: GDB:119517; OMIM:176760
A:Map position: 6p22.2-6p22.1
A:Introns: 9/3; 68/3; 104/3; 164/3
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta
F:1-28/Domains: signal sequence #status predicted <SIG>
F:29-227/Product: prolactin #status experimental <MAT>
F:32-39, 86-202, 219-227/Distulfide bonds: #status predicted

Query Match          99.3%; Score 1035; DB 1; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.5e-75;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
DB 29 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 88
OY 61 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 120
DB 89 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 148
OY 121 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 180
DB 149 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 208
OY 181 KIDNYLKILKCRITIHNNNC 199
DB 209 KIDNYLKILKCRITIHNNNC 227

RESULT 2
A:Reference number: A61402; MUID:91267286; PMID:2050267
A:Accession: A61402
A:Molecule type: mRNA
A:Residues: 1-228 <HIR>
A:Cross-references: UNIPARC:UPI00001765D2
C:Superfamily: prolactin
C:Keywords: alternative splicing
F:87-203, 220-228/Distulfide bonds: #status predicted

Query Match          98.2%; Score 1023; DB 2; Length 228;
Best Local Similarity 99.0%; Pred. No. 2.2e-74;
Matches 197; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY 1 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
DB 30 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 89
OY 61 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 120
DB 90 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 149
OY 121 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 180
DB 150 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 209
OY 181 KIDNYLKILKCRITIHNNNC 199

A:Reference number: A92177; MUID:75151509; PMID:1126929
A:Accession: A92177
A:Molecule type: Protein
A:Residues: 29-52, 'L' <JAC>
A:Cross-references: UNIPARC:UPI0000173457
C:Genetics:
A:Gene: GDB:PRL
A:Cross-references: GDB:119517; OMIM:176760
A:Map position: 6p22.2-6p22.1
A:Introns: 9/3; 68/3; 104/3; 164/3
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta
F:1-28/Domains: signal sequence #status predicted <SIG>
F:29-227/Product: prolactin #status experimental <MAT>
F:32-39, 86-202, 219-227/Distulfide bonds: #status predicted

Query Match          99.3%; Score 1035; DB 1; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.5e-75;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
DB 29 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 88
OY 61 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 120
DB 89 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 148
OY 121 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 180
DB 149 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 208
OY 181 KIDNYLKILKCRITIHNNNC 199
DB 209 KIDNYLKILKCRITIHNNNC 227

RESULT 3
A:Reference number: A51531; MUID:91230144; PMID:2029533
A:Accession: A51531
A:Molecule type: protein
A:Residues: 1-199 <MAR>
A:Cross-references: UNIPROT:P22393; UNIPARC:UPI000013223E
R:Martinat, N.; Hueb, J.C.; Neopoulou, C.; Combarrous, Y.; Pernollet, J.C.
Biochim. Biophys. Acta 1077, 339-345, 1991
A:Title: Determination of the primary and secondary structures of the dromedary (Camelus
A:Reference number: A51531; MUID:91230144; PMID:2029533
A:Accession: A51531
A:Status: preliminary
A:Molecule type: protein
A:Residues: 1-199 <MAR>
A:Cross-references: UNIPROT:P22393; UNIPARC:UPI000013223E
R:Martinat, N.; Anouassi, A.; Hueb, J.C.; Pernollet, J.C.; Combarrous, Y.
Comp. Biochem. Physiol. B 97, 667-674, 1990
A:Title: Purification and characterization of glycosylated and non-glycosylated forms of
A:Reference number: A60513; MUID:91199560; PMID:2085952
A:Accession: A60513
A:Molecule type: protein
A:Residues: 1-40 <MA2>
A:Cross-references: UNIPARC:UPI00001765D4
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta

Query Match          84.4%; Score 879; DB 2; Length 199;
Best Local Similarity 80.9%; Pred. No. 5.7e-63;
Matches 161; Conservative 22; Mismatches 16; Indels 0; Gaps 0;

OY 1 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
DB 1 LPICGGAARCOVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
OY 61 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 120
DB 61 SSLATPEDEKQAQONQKDFLSLIVSILRSNNEPLVHLYTEVRGMOEAPPAILSKAVEIE 120
OY 121 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 180
DB 121 EOTKRLERMEILVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYYNLLHCLRRDSH 180
OY 181 KIDNYLKILKCRITIHNNNC 199
DB 181 KIDNYLKILKCRITIHNNNC 199

RESULT 4
A:Reference number: A60971; MUID:90262633; PMID:2344390
A:Accession: A60971
A:Molecule type: mRNA
A:Residues: 1-229 <SCH>
A:Cross-references: UNIPROT:P01238; UNIPARC:UPI000016C6E6; EMBL:X14068; NID:G2082; PIDN:
R:Kato, Y.; Hirai, T.; Kato, T.
J. Mol. Endocrinol. 4, 135-142, 1990
A:Title: Molecular cloning of cDNA for porcine prolactin precursor.
A:Reference number: A60971; MUID:90262633; PMID:2344390
A:Accession: A60971
A:Molecule type: mRNA
A:Residues: 1-3, 'R', '5', 'X', '7-42', 'V', '44-229 <KAT>
A:Cross-references: UNIPARC:UPI000017345B
```

R.L.I. C.H.
Int. J. Pept. Protein Res. 8, 205-224, 1976
A:Title: Studies on pituitary lactogenic hormone. The primary structure of the porcine h
A:Reference number: A91770; MUID:76189476; PMID:1270193
A:Accession: A01507
A:Molecule type: protein
A:Residues: 31-42, 'V', 44-151, 'E', 153-225, 'N', 227-229 <LIC>
A:Cross-references: UNIPROT:UPI000017345C
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta
F:1-30/Domain: signal sequence #status predicted <SIG>
F:31-229/Product: prolactin #status experimental <MAT>
F:34-41, 88-204, 221-229/Disulfide bonds: #status experimental

Query Match 83.4%; Score 869; DB 1; Length 229;
Best Local Similarity 80.4%; Pred. No. 4,3e-62;
Matches 160; Conservative 22; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGGAARCOVTLRDLFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 31 LPICSGAVNCQVSLRDLFDRAVILSHYIHNLSSEMFSEFDKRYAQGRGFTITKAINSCHT 90
QY 61 SSLATPEDEKQAOQNMNQKDFLSIVLSIRSMNEPLVHLVTEVRGMOEAPALISKAVEIE 120
DB 91 SSLSTPEDEKQAOQHHEVLLMLILAVLSKMDPLVHLVTEVRGMOEAPALISRAIEIE 150
QY 121 EOTKRLERMELIVSQVHPETKENETIYPWVSGLPISQMADESRSLSAVYNLHLCLRRDSH 180
DB 151 EGNKRLBEMEKIVGVHGIKENEVYSVWSGLPSIQMADEDTPLPAFYNLHLCLRRDSH 210
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 211 KIDNYLKLKCRITIVDSNC 229

RESULT 5
LCHO
prolactin - horse
C:Species: Equus caballus (domestic horse)
C:Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 09-Jul-2004
C:Accession: JK0016
R:Lehman, S.R.; Lam, H.W.; Medel, M.C.; Hulmes, J.D.; Li, C.H.
Int. J. Pept. Protein Res. 31, 544-554, 1988
A:Title: Primary structure of equine pituitary prolactin.
A:Reference number: JK0016; MUID:88314465; PMID:3045032
A:Accession: JK0016
A:Molecule type: protein
A:Residues: 1-199 <LEH>
A:Cross-references: UNIPROT:P12420; UNIPARC:UPI0000132247
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta
F:4-11, 58-174, 191-199/Disulfide bonds: #status predicted

Query Match 83.3%; Score 868; DB 1; Length 199;
Best Local Similarity 79.4%; Pred. No. 4,3e-62;
Matches 158; Conservative 24; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGGAARCOVTLRDLFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 1 LPICSGAVNCQVSLRDLFDRAVILSHYIHNLSSEMFSEFDKRYAQGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAOQNMNQKDFLSIVLSIRSMNEPLVHLVTEVRGMOEAPALISKAVEIE 120
DB 61 SSLSTPEDEKQAOQHHEVLLMLILAVLSKMDPLVHLVTEVRGMOEAPALISRAIEIE 120
QY 121 EOTKRLERMELIVSQVHPETKENETIYPWVSGLPISQMADESRSLSAVYNLHLCLRRDSH 180
DB 121 EGNKRLBEMEKIVGVHGIKENEVYSVWSGLPSIQMADEDTPLPAFYNLHLCLRRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIVDSNC 199

RESULT 6
JC4631
prolactin precursor - cat
C:Species: Felis silvestris catus (domestic cat)
C:Date: 10-Apr-1996 #sequence_revision 24-May-1996 #text_change 09-Jul-2004
A:Accession: JC4631
R:Warren, W.C.; Bentle, K.A.; Bogosian, G.
Gene 168, 247-249, 1996
A:Title: Cloning of the cDNA coding for cat growth hormone and prolactin.
A:Reference number: JC4631; MUID:96194906; PMID:8654953
A:Accession: JC4631
A:Molecule type: mRNA
A:Residues: 1-229 <WAR>
A:Cross-references: UNIPROT:P46403; UNIPARC:UPI0000132246; GB:U25974; NID:G825770; PIDN:
A:Experimental source: pituitary
C:Genetics: prl
A:Gene: prl
C:Superfamily: prolactin
C:Keywords: glycoprotein; pituitary
F:1-30/Domain: signal sequence #status predicted <SIG>
F:31-229/Product: prolactin #status predicted <MAT>
F:61/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 82.4%; Score 859; DB 2; Length 229;
Best Local Similarity 78.4%; Pred. No. 2,7e-61;
Matches 156; Conservative 25; Mismatches 18; Indels 0; Gaps 0;

QY 1 LPICPGGAARCOVTLRDLFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 31 LPICSGAVNCQVSLRDLFDRAVILSHYIHNLSSEMFSEFDKRYAQGRGFTITKAINSCHT 90
QY 61 SSLATPEDEKQAOQNMNQKDFLSIVLSIRSMNEPLVHLVTEVRGMOEAPALISKAVEIE 120
DB 91 SSLSTPEDEKQAOQHHEVLLMLILAVLSKMDPLVHLVTEVRGMOEAPALISRAIEIE 150
QY 121 EOTKRLERMELIVSQVHPETKENETIYPWVSGLPISQMADESRSLSAVYNLHLCLRRDSH 180
DB 151 EGNKRLBEMEKIVGVHGIKENEVYSVWSGLPSIQMADEDTPLPAFYNLHLCLRRDSH 210
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 211 KIDNYLKLKCRITIVDSNC 229

RESULT 7
PN0128
prolactin - sei whale
C:Species: Balenoptera borealis (sei whale)
C:Date: 07-May-1993 #sequence_revision 07-May-1993 #text_change 09-Jul-2004
C:Accession: PN0128
R:Karaseva, L.I.; Pankov, Y.A.
Biochimica 50, 1528-1534, 1985
A:Title: Primary structure of sei whale prolactin.
A:Reference number: PN0128; MUID:86026530; PMID:4052510
A:Accession: PN0128
A:Molecule type: protein
A:Residues: 1-199 <KAR>
A:Cross-references: UNIPROT:P33089; UNIPARC:UPI0000132238
A:Note: article in Russian with English abstract
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta
F:4-11, 58-174, 191-199/Disulfide bonds: #status predicted

Query Match 81.9%; Score 853; DB 2; Length 199;
Best Local Similarity 78.4%; Pred. No. 6,8e-61;
Matches 156; Conservative 25; Mismatches 18; Indels 0; Gaps 0;

QY 1 LPICPGGAARCOVTLRDLFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 1 LPICSGAVNCQVSLRDLFDRAVILSHYIHNLSSEMFSEFDKRYAQGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAOQNMNQKDFLSIVLSIRSMNEPLVHLVTEVRGMOEAPALISKAVEIE 120

Db 61 SSIOTPEDEKQAOZIHHEVLVSLILGLRSMNBPPLVLTVEVGMCEAPALLSRAIQIE 120

Qy 121 EOTKLLLEMEELIVSOVHEETKENEIETYPWMSGPSPLOMADEESRLSAYVYLHCLRDSDH 180

Db 121 EENKLLLEMEELIVSOVHEETKENEIETYPWMSGPSPLOMADEEDTRLPAFYLLHCLRDSDH 180

Qy 181 KIDNYLKLKCRITNNNC 199

Db 181 KIDSYLKLKCRITVNSNC 199

RESULT 8

LCBO

prolactin precursor - bovine

C:Species: Bos primigenius taurus (cattle)

C:Date: 18-Aug-1982 #sequence revision 18-Aug-1982 #text change 09-Jul-2004

C:Accession: A92378, A90939, A91411, UN0405, A90002, S39389, I45968, I45972, I45973, I45974, S39389, N.L.; Nilsson, U.H.; Horowitz, S.; Kottman, F.M.

R:Saavaga, N.L.; Nilsson, U.H.; Horowitz, S.; Kottman, F.M.

R:Saavaga, N.L.; Nilsson, U.H.; Horowitz, S.; Kottman, F.M.

A:Title: Nucleotide sequence of bovine prolactin messenger RNA. Evidence for sequence pol

A:Reference number: A92378, MUID:82098114, PMID:6274859

A:Accession: A92378

A:Molecule type: mRNA

A:Residues: 1-229 <SAS>

A:Cross-references: UNIPROT:P01239, UNIPARC:UPI000013223C, GB:J00022, NID:9495, PIDN:CAP

R:Miller, W.L.; Colt, D.; Baxter, J.D.; Martial, J.A.

DNA 1, 37-50, 1981

A:Title: Cloning of bovine prolactin cDNA and evolutionary implications of its sequence.

A:Reference number: A90939, MUID:83157107, PMID:6259655

A:Accession: A90939

A:Molecule type: mRNA

A:Residues: 21-40, 'R', '42-109, 'V', '111-229 <MTL>

A:Cross-references: UNIPARC:UPI000017345D

A>Note: corrections to the published sequence are given in reference A90936

R:Miller, W.L.; Colt, D.; Baxter, J.D.; Martial, J.A.

DNA 1, 313-314, 1982

A:Title: Bovine prolactin: corrected cDNA sequence and genetic polymorphisms.

A:Reference number: A90936, MUID:83182016, PMID:6897772

A:Contents: annotation; revisions

R:Kallit, M.

FEBS Lett. 44, 205-208, 1974

A:Title: The primary structure of bovine prolactin.

A:Reference number: A91411, MUID:75031394, PMID:4608931

A:Accession: A91411

A:Molecule type: protein

A:Residues: 31-33, 'X', '41-60, 'N', '62-99, 'XX', '102, 'XX', '105-107, 'X', '109-121, 'XX', '124-147, 'X

A:Cross-references: UNIPARC:UPI000017345E

R:Yudaev, N.A.; Pankov, Y.A.; Elizarova, G.P.; Han, Z.; Nikolaeva, O.P.

Bioorg. Khim. 1, 97-112, 1975

A:Title: The primary structure of bovine prolactin.

A:Reference number: JN0405

A:Accession: JN0405

A:Molecule type: protein

A:Residues: 31-64, 'Q', '66-117, '119-130, 'G', '132-147, 'G', '149-160, 'XX', '163-229 <YUD>

A:Cross-references: UNIPARC:UPI000017345F

R:Graf, L.; Cseh, G.; Nagy, I.; Kurcz, M.

Acta Biochim. Biophys. Acad. Sci. Hung. 5, 299-303, 1970

A:Title: An evidence for deamidation of prolactin monomer.

A:Reference number: A90002, MUID:71150631, PMID:5507606

A:Accession: A90002

A:Molecule type: protein

A:Residues: 31-46 <GRA>

A:Cross-references: UNIPARC:UPI0000173460

R:Kim, B.G.; Brooks, C.L.

Biochem. J. 296, 41-47, 1993

A:Title: Isolation and characterization of phosphorylated bovine prolactin.

A:Reference number: S39389, MUID:94071839, PMID:8250856

A:Accession: S39389

A:Molecule type: protein

A:Residues: 52-72, '120-133 <KIM>

A:Cross-references: UNIPARC:UPI0000173461, UNIPARC:UPI0000173462

R:Miller, W.L.; Thirion, J.

Endocrinology 107, 851-854, 1980
A>Title: Cloning of DNA complementary to bovine prolactin mRNA.
A.Reference number: 145968; PMID:80245858; PMID:6995103
A.Accession: 145968
A>Status: preliminary; translated from GB/EMBL/DBJ
A.Molecule type: mRNA
A.Residues: 129-229 <M12>
A.Cross-references: UNIPARC:UPI000000045B; GB:M25007; NID:g163609; PIDN:AAA30732.1; PID:5
R.Rubtsov, P.M.; Oqansayan, R.G.; Gorbulev, V.G.; Skryabin, K.G.; Baev, A.A.
Mol. Biol. 22, 117-121, 1988
A>Title: Genetic engineering of peptide hormones: II. Possible polymorphism of preprolactin
A.Reference number: 145972
A.Accession: 145972
A>Status: preliminary; translated from GB/EMBL/DBJ
A.Molecule type: mRNA
A.Residues: 1-9, 'A', 10-68 <RU2>
A.Cross-references: UNIPARC:UPI000016C36A; GB:M36873; NID:g163623; PIDN:AAA30737.1; PID:5
A.Accession: 145973
A>Status: preliminary; translated from GB/EMBL/DBJ
A.Molecule type: mRNA
A.Residues: 96-229 <RUB>
A.Cross-references: UNIPARC:UPI000016C369; GB:M36874; NID:g163624; PIDN:AAA30738.1; PID:5
R.Carroll, S.M.; Narayan, P.; Rotman, F.M.
Mol. Cell. Biol. 10, 4456-4465, 1990
A>Title: N-6-methyladenosine residues in an intron-specific region of bovine prolactin pre
A.Reference number: 145965; PMID:90355957; PMID:2388614
A.Accession: 145969
A.Status: translation not shown; translated from GB/EMBL/DBJ
A.Molecule type: DNA
A.Residues: 167-229 <CAR>
A.Cross-references: UNIPARC:UPI000000048E; GB:M34535; NID:g163611; PIDN:AAA30733.1; PID:5
R.Camper, S.A.; Luck, D.N.; Yao, Y.; Woychik, R.P.; Goodwin, R.G.; Lyons, R.H.; Rotman,
DNA 3, 237-249, 1984
A>Title: Characterization of the bovine prolactin gene.
A.Reference number: 145970; PMID:84260950; PMID:6086257
A.Accession: 145970
A>Status: preliminary; translated from GB/EMBL/DBJ
A.Molecule type: DNA
A.Residues: 1-17, 'L', 18-38 <CAM>
A.Cross-references: UNIPARC:UPI0000173463; GB:K01937; NID:g163614; PID:g163616
C.Genetics:
A.Introns: 10/1; 30/3
A>Note: list of introns may be incomplete
C.Superfamily: prolactin
C.Keywords: anterior pituitary; hormone; lactation; phosphoprotein; placenta
F.1-3/DNA: signal sequence #status predicted <SIG>
F.1-3/Domain: signal sequence #status experimental <MAT>
F.1-3/229/Product: prolactin #status experimental
F.1-3/41,88-204,221-229/Duplicate bonds: #status experimental

Query Match 75.7%; Score 789; DB 1; Length 229;
Best Local Similarity 73.2%; Pred. No. 1e-55;
Matches 145; Conservative 24; Mismatches 29; Indels 0; Gaps 0;

QY 2 PICPGGAACGCTATLDLPRAVVLVSHYNHLSSEMFEPDKRYTGGFTTKAINSCHTS 61
| | | | | : | | | | | : | | | | | : | | | | | : | | | | | : | | | | |
Db PVCNPENPCGCQSRLRPDPAVWVSHYINDLSSEMFEPDKRYAKOGSGFITMALNSCHTS 91
| | | | | : | | | | | : | | | | | : | | | | | : | | | | | : | | | | |
QY 92 SLTPREDKQAQGTTHNEVMLSLTGLRSWNDDLYHLVTEVRGMEAPALSKAVEIEE 121
| | | | | : | | | | | : | | | | | : | | | | | : | | | | | : | | | | |
Db 122 QTKRLERELLVSQNHRETKEVEITPWSGSLPSLOMADEESLSAYUNLLHCIRBSHK 181
| | | | | : | | | | | : | | | | | : | | | | | : | | | | | : | | | | |
152 ENKRILEGEMETFGQVTPGAKETEPYPVWSGLRSTQTKEDARYSAFYNLHLCRRSSK 211
| | | | | : | | | | | : | | | | | : | | | | | : | | | | | : | | | | |
QY 182 IDNYLKTLCKRIIHNNNC 199
| | | | | : | | | | | : | | | | | : | | | | | : | | | | | : | | | | |
Db 212 IDTYLKLNCRILYYNNC 229

RESULT 9
LCSH
prolactin precursor - sheep

QY 61 SGLAPDEDEQAOQNMNQKDFLSITVLSISWNEPLVLTVEYMGQAPALISKVEIE 120
DB 61 SGLTPDEDEQAOQIHHEDDLNLVLGVLSWNPDLHLVSEVGSIXEAPUTII-KAVEIE 119
QY 121 EOTKRLLEMEILVISOVHEETKENEIYPVWSGFLSQMADEESRLSAVYVNLHCLRDSDH 180
DB 120 EODKRLLEMEIKIVGVVHGEIENELYSPPSGFLSQVDEDSRLFAFYVNLHCLRDSDH 179
QY 181 KIDNYIKLIKRIIHNNC 199
DB 180 KIDNYIKLIKRIIHNDC 198

RESULT 12
S18882
prolactin - American mink (fragment)
C:Species: Mustela vison (American mink)
C:Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
C:Accession: S18882
R:Bondar, A.A.; Golovin, S.J.; Mertvetsov, N.P.
submitted to the EMBL Data Library, November 1991
A:Reference number: S18882
A:Accession: S18882
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-175 <BNP>
A:Cross-references: UNIPROT:P29234; UNIPARC:UPI000016C4A1; EMBL:X63235; NID:g1182; PIDN:C:Superfamily: prolactin

Query Match 73.3%; Score 764; DB 2; Length 175;
Best Local Similarity 79.4%; Pred. No. 7, 2e-54;
Matches 139; Conservative 23; Mismatches 13; Indels 0; Gaps 0;

QY 25 LSHYIHNLSSEMESEFDRKRYTHGRGPTTKAINSCHTSSLTAPDEKQAOQNMOKDFLSI 84
DB 1 LSHYIHNLSSEMESEFDRKRYTHGRGPTTKAINSCHTSSLTAPDEKQAOQIHHEDDLNL 60
QY 85 VSLIRWNEPLVHLVTEVGMQAPAEALISKAVEIEQTRRLERMLIYSOVHPETKEN 144
DB 61 LRVLRWNPVHLVSEVRGMQAPDSILSRALIEIQNRLLLEGKEKIVGVHPGVREN 120
QY 145 EIVPVWSGFLSQMADEESRLSAVYVNLHCLRDSDHKIDVYIKLIKRIIHNNC 199
DB 121 EIVPVWSGFLSQMADEESRLFAFYVNLHCLRDSDHKIDVYIKLIKRIIYDSDNC 175

RESULT 13
A60972
prolactin precursor - chicken
C:Species: Gallus gallus (chicken)
C:Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C:Accession: A60972; A32855
C:Accession: A60972; A32855
R:Hanks, M.C.; Alonzi, J.A.; Sharp, P.J.; Sang, H.M.
J. Mol. Endocrinol. 2, 21-30, 1989
A:Title: Molecular cloning and sequence analysis of putative chicken prolactin cDNA.
A:Reference number: A60972; MUID:89351551; PMID:2765112
A:Accession: A60972
A:Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-229 <HAN>
A:Cross-references: UNIPROT:P14676; UNIPARC:UPI0000132242
R:Watanabe, M.; Tanaka, M.; Masuda, N.; Sugisaki, K.; Yamamoto, M.; Yamakawa, M.; Nagai, J.
Biochem. Biophys. Res. Commun. 264, 5535-5539, 1999
A:Title: Primary structure of chicken pituitary prolactin deduced from the cDNA sequence
A:Reference number: A32855; MUID:89174595; PMID:2925618
A:Accession: A32855
A:Molecule type: mRNA
A:Residues: 1-170, 'H', 172-179, 'S', 181-204, 'H', 206-229 <MAT>
A:Cross-references: UNIPARC:UPI00000FC2E2; GB:J04614; NID:g212612; PIDN:AAA49040.1; PIDN:C:Comment: The reason for differences between the two records above is unclear. Prolactin deduced from turkey at each position in which the two references above disagree.
C:Superfamily: prolactin

```

F.11-30/Domains: signal sequence #status predicted <SIG>
F.11-229/Product: prolactin #status predicted <MAT>
F.13-41, 68-204, 221-229/Disulfide bonds: #status predicted

Query Match          73.1%; Score 762; DB 2; Length 229;
Best Local Similarity 70.9%; Pred. No. 1,4e-53;
Matches 141; Conservative 27; Mismatches 31; Indels 0; Gaps 0;

QY      1 LPICGGGAARCOVTLRDLPDRAVVLSHYIHLNLSSEMSSEPDKRTTHRGFTTKAINSGHT 60
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      31 LPICIGSVNCCVSLGELFDRRAVLSHYIHYLSSEIFNEPDERVAQGRFTTKAVNGCHT 90
QY      61 SSLAPPEDEQAQQNQKQFSLIVSILRSNBPYLVLTVRGMQEAPEAILSKAVEIE 120
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      91 SSLTPPEDEQAQQQIHBDLNLVGVLSNBPYLHLASEVQRIKEAPDTILMKAVEIE 150
QY      121 EGTKRLERMEILVSVQVHEETKENEIYPVWSGSPSLQMADEESRLSAYNNLHLCIRDSH 180
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      151 EGNKRLERMEKIVGVHSGDAGNETIYSHWDGLPSQLDAEDDSRLPAFYNNLHLCIRDSH 210
QY      161 KIDNYLKLIKCRTHNNNC 199
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      211 KIDNYLKVLKCRLLHDSNC 229
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

RESULT 14
A61133
prolactin precursor - turkey
C.Species: Meleagris gallinavo (common turkey)
C.Date: 10-Mar-1994 #sequence revision 07-Apr-1994 #text_change 09-Jul-2004
C.Accession: A61133; S10170; A61528
R.Wong, E.A.; Ferrin, N.H.; Silbey, J.L.; El Halawani, M.E.
Gen. Comp. Endocrinol. 83, 18-26, 1991
A.Title: Cloning of a turkey prolactin cDNA: expression of prolactin mRNA throughout the
A.Reference number: A61133; PMID:91348480; PMID:1879669
A.Accession: A61133
A.Molecule type: mRNA
A.Residues: 1-155, 'R', 157-229 <MO2>
A.Cross-references: UNIPROT:PI7572; UNIPARC:UPI00000171406; GB:U05952; NID:g454094; PIDN:
R.Karatzas, C.N.; Zadworny, D.; Kuhnlehn, U.
Nucleic Acids Res. 18, 3071, 1990
A.Title: Nucleotide sequence of turkey prolactin.
A.Reference number: S10170; PMID:90272435; PMID:2349117
A.Accession: S10170
A.Molecule type: mRNA
A.Residues: 21-229 <KAR>
A.Cross-references: UNIPARC:UPI0000171409; EMBL:X51769; NID:g64095; PIDN:CAA36071.1; PID
R.Corocezan, D.H.; Proudman, J.A.
Comp. Biochem. Physiol. B 99, 563-570, 1991
A.Title: Isoforms of turkey prolactin: evidence for differences in glycosylation and in
A.Reference number: A61528; PMID:92119931; PMID:1769204
A.Accession: A61528
A.Molecule type: protein
A.Residues: 31-70 <COR>
A.Cross-references: UNIPARC:UPI00001765CF
C.Superfamily: prolactin
C.Keywords: hormone; pituitary
F.11-30/Domains: signal sequence #status predicted <SIG>
F.11-229/Product: prolactin #status predicted <MAT>
F.13-41, 68-204, 221-229/Disulfide bonds: #status predicted

Query Match          71.6%; Score 746; DB 2; Length 229;
Best Local Similarity 68.3%; Pred. No. 2,7e-52;
Matches 136; Conservative 30; Mismatches 33; Indels 0; Gaps 0;

QY      1 LPICGGGAARCOVTLADLPRAVVLSHYIHLNLSSEMSSEPDKRTTHRGFTTKAINSGHT 60
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      31 LPICGSSVNCQVSLGELFDRRAVLSHYIHLSEIFNEPDERVAQGRFTTKAVNGCHT 90
QY      61 SSLAPPEDEQAQQNQKQFSLIVSILRSNBPYLVLTVRGMQEAPEAILSKAVEIE 120
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      91 SSLTPPEDEQAQQQIHBDLNLVGVLSNBPYLHLASEVQRIKEAPDTILMKAVEIE 150
QY      121 EGTKRLERMEILVSVQVHEETKENEIYPVWSGSPSLQMADEESRLSAYNNLHLCIRDSH 180
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      151 EGNKRLERMEKIVGVHSGDAGNETIYSHWDGLPSQLDAEDDSRLPAFYNNLHLCIRDSH 210
QY      161 KIDNYLKLIKCRTHNNNC 199
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB      211 KIDNYLKVLKCRLLHDSNC 229
        |||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:24:40 ; Search time 46 Seconds
(without alignments)
357.662 Million cell updates/sec

Title: US-09-815-306A-34

Perfect score: 1042
Sequence: 1 LPICPGAAACQVTLRLDLPD.....HKIDNYLKIKGRIIHNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
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3: /cgn2_6/prodata/1/1aa/7/COMB.rep.*
4: /cgn2_6/prodata/1/1aa/8/COMB.rep.*
5: /cgn2_6/prodata/1/1aa/9/COMB.rep.*
6: /cgn2_6/prodata/1/1aa/backfile1.rep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1035	99.3	199	2	US-08-737-248-7
2	1035	99.3	226	2	US-09-949-016-10071
3	1035	99.3	351	1	US-08-186-350-1
4	1031	98.9	228	2	US-09-065-330D-2
5	879	84.4	199	2	US-08-737-248-10
6	869	83.4	199	2	US-08-737-248-12
7	868	83.3	199	2	US-08-737-248-8
8	863	82.8	199	2	US-08-737-248-14
9	863	82.8	199	2	US-08-737-248-13
10	788	75.6	199	2	US-08-737-248-11
11	778.5	74.7	198	2	US-08-737-248-6
12	746	71.6	199	2	US-08-737-248-2
13	746	71.6	426	2	US-08-737-248-4
14	740	71.0	199	2	US-08-737-248-5
15	729	70.0	199	2	US-08-737-248-9
16	659	63.2	197	2	US-08-737-248-15
17	659	63.2	197	2	US-08-737-248-17
18	630	60.5	125	2	US-08-985-526-25
19	630	60.5	253	2	US-08-985-526-27
20	613	58.8	197	2	US-08-737-248-16
21	370	35.5	199	2	US-08-737-248-23
22	272	26.1	187	2	US-08-737-248-18
23	272	26.1	187	2	US-08-737-248-19
24	262	25.1	177	2	US-08-737-248-21
25	262	25.1	236	2	US-09-602-848-2
26	261.5	25.1	188	2	US-08-737-248-20
27	246	23.6	223	2	US-09-602-848-4

28	202.5	19.4	207	1	US-07-656-566-2	Sequence 2, Appl1
29	202.5	19.4	231	1	US-07-656-566-3	Sequence 3, Appl1
30	198	19.0	191	2	US-08-737-248-22	Sequence 22, Appl1
31	198	19.0	217	2	US-08-589-028-10	Sequence 10, Appl1
32	198	19.0	217	2	US-08-784-582-10	Sequence 10, Appl1
33	198	19.0	217	2	US-08-785-271-10	Sequence 10, Appl1
34	198	19.0	217	2	US-08-759-628-11	Sequence 11, Appl1
35	198	19.0	217	2	US-09-284-878-1	Sequence 1, Appl1
36	198	19.0	217	2	US-09-929-918-9	Sequence 9, Appl1
37	198	19.0	217	2	US-09-571-024B-1	Sequence 1, Appl1
38	196	18.8	191	2	US-09-571-024B-9	Sequence 9, Appl1
39	195	18.7	217	1	US-08-469-486-51	Sequence 51, Appl1
40	195	18.7	217	1	US-08-469-658-51	Sequence 51, Appl1
41	192	18.4	191	2	US-08-093-383-3	Sequence 3, Appl1
42	192	18.4	191	2	US-09-571-024B-3	Sequence 3, Appl1
43	191	18.3	191	2	US-09-571-024B-6	Sequence 6, Appl1
44	191	18.3	217	1	US-08-187-756C-4	Sequence 4, Appl1
45	191	18.3	217	1	US-08-710-324A-4	Sequence 4, Appl1

ALIGNMENTS

RESULT 1
US-08-737-248-7
Sequence 7, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadworny, David
APPLICANT: Karatzas, Coelias
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
TITLE OF INVENTION: TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESSES:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-Apr-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989,6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-7
Query Match 99.3%; Score 1035; DB 2; Length 199;

Best Local Similarity 99.5%; Pred. No. 1.7e-99;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Db 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Qy 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGMOEAPPAILSKAVEIE 120
Db 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGMOEAPPAILSKAVEIE 120
Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
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Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Db 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 181 KIDNYLKLKCRITIHNNNC 199

RESULT 2
US-09-949-016-10071
; Sequence 10071, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; FILE REFERENCE: CLO01307
; CURRENT APPLICATION NUMBER: US/09/949,016
; PRIOR FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10071
; LENGTH: 236
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-10071

Query Match 99.3%; Score 1035; DB 2; Length 236;
Best Local Similarity 99.5%; Pred. No. 2.1e-99;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Db 38 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 97
Qy 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGMOEAPPAILSKAVEIE 120
Db 98 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGMOEAPPAILSKAVEIE 157
Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Db 158 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 217
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 218 KIDNYLKLKCRITIHNNNC 236

RESULT 3
US-08-196-350-1
; Sequence 1, Application US/08196350
; Patent No. 5585099
; GENERAL INFORMATION:
; APPLICANT: Richardson, Sue
; APPLICANT: Kaplan, Joanne

APPLICANT: Mosciicki, Richard
TITLE OF INVENTION: PROLACTIN AS ADJUVANT
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Brad Salcedo
STREET: One Kendall Square
CITY: Cambridge
STATE: MA
COUNTRY: U.S.A.
ZIP: 02139
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/196,350
FILING DATE:
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Goetz, William G
REGISTRATION NUMBER: 27,787
REFERENCE/DOCKET NUMBER: GEN 4-1.0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 6172527868
TELEFAX: 6173747225
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 351 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
ORGANISM: human prolactin
US-08-196-350-1

Query Match 99.3%; Score 1035; DB 1; Length 351;
Best Local Similarity 99.5%; Pred. No. 3.7e-99;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Db 153 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 212
Qy 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGMOEAPPAILSKAVEIE 120
Db 213 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGMOEAPPAILSKAVEIE 272
Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Db 273 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 332
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 333 KIDNYLKLKCRITIHNNNC 351

RESULT 4
US-09-065-330D-2
; Sequence 2, Application US/09065330D
; Patent No. 6890738
; GENERAL INFORMATION:
; APPLICANT: WALKER, Ameae M.
; TITLE OF INVENTION: PROLACTIN ANTAGONISTS AND USES THEREOF
; FILE REFERENCE: 39754-0611-1CP1CP
; CURRENT APPLICATION NUMBER: US/09/065,330D
; PRIOR FILING DATE: 1998-04-23
; PRIOR APPLICATION NUMBER: PCT/US97/01435
; PRIOR FILING DATE: 1997-01-30
; PRIOR APPLICATION NUMBER: US 08/594,809

PRIOR FILING DATE: 1996-01-31
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 228
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: VARIANT
LOCATION: 208
OTHER INFORMATION: Site mutated amino acid residue where the normal
OTHER INFORMATION: codon coding for serine is modified preferably to encode
OTHER INFORMATION: for aspartate or glutamate, most preferably
OTHER INFORMATION: aspartate.
US-09-065-330D-2

Query Match 98.9%; Score 1031; DB 2; Length 228;
Best Local Similarity 99.0%; Pred. No. 5.2e-99;
Matches 197; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 LPIPCGAGRCVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 30 LPIPCGAGRCVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 89
QY 61 SSLATPEDKEQAQQNQKDFLSIVLSRNNPELYHLYTEVRGQEAPEALISKAVERE 120
DB 90 SSLATPEDKEQAQQNQKDFLSIVLSRNNPELYHLYTEVRGQEAPEALISKAVERE 149
QY 121 EOTKRLLEMEILVQVHPETKENEIYPVWSGLPSIQMADESRISAAYNNLHCLRRDSH 180
DB 150 EOTKRLLEMEILVQVHPETKENEIYPVWSGLPSIQMADESRISAAYNNLHCLRRDSH 209
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 210 KIDNYLKLKCRITIHNNNC 228

RESULT 5

US-08-737-248-10
Sequence 10, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Coetas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763

REFERENCE/DOCKET NUMBER: 989.6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-10

Query Match 84.4%; Score 879; DB 2; Length 199;
Best Local Similarity 80.9%; Pred. No. 2.7e-83;
Matches 161; Conservative 22; Mismatches 16; Indels 0; Gaps 0;

QY 1 LPIPCGAGRCVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 1 LPIPCGAGRCVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
QY 61 SSLATPEDKEQAQQNQKDFLSIVLSRNNPELYHLYTEVRGQEAPEALISKAVERE 120
DB 61 SSLATPEDKEQAQQNQKDFLSIVLSRNNPELYHLYTEVRGQEAPEALISKAVERE 120
QY 121 EOTKRLLEMEILVQVHPETKENEIYPVWSGLPSIQMADESRISAAYNNLHCLRRDSH 180
DB 121 EOTKRLLEMEILVQVHPETKENEIYPVWSGLPSIQMADESRISAAYNNLHCLRRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIHNNNC 199

RESULT 6

US-08-737-248-12
Sequence 12, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Coetas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989.6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383

TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-737-248-12

Query Match 83.4%; Score 869; DB 2; Length 199;
Best Local Similarity 80.4%; Pred. No. 3e-82;
Matches 160; Conservative 22; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGAAACQVTLRDLFDRAVVLSHYINLSSEMFSEDPKRYTHRGFTTAINCHT 60
Db 1 LPICPGAVNCQVSLRELFDRAVILSHYINLSSEMFNEPDKRYAOGRGFTTAINCHT 60

QY 61 SSLATPEDKQAOQOIHHEVLNLILRVLSWMDPLVHLVTEVRGMOAPEALISKAVEIE 120
Db 61 SSLATPEDKQAOQOIHHEVLNLILRVLSWMDPLVHLVTEVRGMOAPEALISKAVEIE 120

QY 121 EQRRLLERMELIYQVHPETKENIYPVWSGLPSLQMADESRLSAYNLLHCLRRDSH 180
Db 121 EQRRLLEGMKEKIVQVHPGIKENEYVSVWSGLPSLQMADEDTRLFAYNLLHCLRRDSH 180

QY 181 KIDNYLKLKCRITIHNNC 199
Db 181 KIDNYLKLKCRITIIDNSC 199

RESULT 7
US-08-737-248-8
; Sequence 8, Application US/08737248
; Patent No. 6114305
; GENERAL INFORMATION:
; APPLICANT: Guemene, Daniel
; APPLICANT: Zadowny, David
; APPLICANT: Karatzas, Costas
; TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WEISER & ASSOCIATES
; STREET: 230 South Fifteenth Street, Suite 500
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/737,248
; FILING DATE: 28-APR-1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FR95/00576
; FILING DATE: 03-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 94/05550
; FILING DATE: 05-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weiser, Gerard J.
; REGISTRATION NUMBER: 19,763
; REFERENCE/DOCKET NUMBER: 989,6411P
; TELEPHONE: 215-875-8383
; TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:

LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-737-248-8

Query Match 83.3%; Score 868; DB 2; Length 199;
Best Local Similarity 79.4%; Pred. No. 3.8e-82;
Matches 158; Conservative 24; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGAAACQVTLRDLFDRAVVLSHYINLSSEMFSEDPKRYTHRGFTTAINCHT 60
Db 1 LPICPGAVNCQVSLRELFDRAVILSHYINLSSEMFNEPDKRYAOGRGFTTAINCHT 60

QY 61 SSLATPEDKQAOQOIHHEVLNLILRVLSWMDPLVHLVTEVRGMOAPEALISKAVEIE 120
Db 61 SSLATPEDKQAOQOIHHEVLNLILRVLSWMDPLVHLVTEVRGMOAPEALISKAVEIE 120

QY 121 EQRRLLERMELIYQVHPETKENIYPVWSGLPSLQMADESRLSAYNLLHCLRRDSH 180
Db 121 EQRRLLEGMKEKIVQVHPGIKENEYVSVWSGLPSLQMADEDTRLFAYNLLHCLRRDSH 180

QY 181 KIDNYLKLKCRITIHNNC 199
Db 181 KIDNYLKLKCRITIIDNSC 199

RESULT 8
US-08-737-248-14
; Sequence 14, Application US/08737248
; Patent No. 6114305
; GENERAL INFORMATION:
; APPLICANT: Guemene, Daniel
; APPLICANT: Zadowny, David
; APPLICANT: Karatzas, Costas
; TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WEISER & ASSOCIATES
; STREET: 230 South Fifteenth Street, Suite 500
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/737,248
; FILING DATE: 28-APR-1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FR95/00576
; FILING DATE: 03-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 94/05550
; FILING DATE: 05-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weiser, Gerard J.
; REGISTRATION NUMBER: 19,763
; REFERENCE/DOCKET NUMBER: 989,6411P
; TELEPHONE: 215-875-8383
; TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:

TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-14

Query Match 82.8%; Score 863; DB 2; Length 199;
Best Local Similarity 80.4%; Pred. No. 1.2e-81;
Matches 160; Conservative 20; Mismatches 19; Indels 0; Gaps 0;

QY 1 LPICGGAGRCQVTLDFDRAVAVLSHYTHNLSSEMFSPDKRYTHRGFTITKAINSCHT 60
DB 1 LPICGGAGRCQVTLDFDRAVAVLSHYTHNLSSEMFSPDKRYTHRGFTITKAINSCHT 60
QY 61 SLTPEDKEQAQQSHHEVLVSLIGLRSWMDPLVHVTVEVGMQAPALISRAIETE 120
DB 61 SLTPEDKEQAQQSHHEVLVSLIGLRSWMDPLVHVTVEVGMQAPALISRAIETE 120
QY 121 EOTKRLERMEILVSOVHPETKENETIYPWSGLPISQMADEESRLSAYVNLHCLRDSH 180
DB 121 EOTKRLERMEILVSOVHPETKENETIYPWSGLPISQMADEESRLSAYVNLHCLRDSH 180
QY 121 EQNKRLLEGMEKIVGVHGVKENEYVSWGSLPSIQMADEDTRLFAPYNLHCLRDSH 180
DB 121 EQNKRLLEGMEKIVGVHGVKENEYVSWGSLPSIQMADEDTRLFAPYNLHCLRDSH 180
QY 181 KIDNYLKLKCRITNNNC 199
DB 181 KIDNYLKLKCRITNNNC 199

RESULT 9

US-08-737-248-13
Sequence 13, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Releasee #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989,6411P
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-13

Query Match 75.7%; Score 789; DB 2; Length 199;
Best Local Similarity 73.2%; Pred. No. 6.1e-74;
Matches 145; Conservative 24; Mismatches 29; Indels 0; Gaps 0;

QY 2 PICPGAGRCQVTLDFDRAVAVLSHYTHNLSSEMFSPDKRYTHRGFTITKAINSCHT 61
DB 2 PICPGAGRCQVTLDFDRAVAVLSHYTHNLSSEMFSPDKRYTHRGFTITKAINSCHT 61
QY 62 SLTPEDKEQAQQSHHEVLVSLIGLRSWMDPLVHVTVEVGMQAPALISRAIETE 121
DB 62 SLTPEDKEQAQQSHHEVLVSLIGLRSWMDPLVHVTVEVGMQAPALISRAIETE 121
QY 122 EOTKRLERMEILVSOVHPETKENETIYPWSGLPISQMADEESRLSAYVNLHCLRDSH 181
DB 122 EOTKRLERMEILVSOVHPETKENETIYPWSGLPISQMADEESRLSAYVNLHCLRDSH 181
QY 182 KIDNYLKLKCRITNNNC 199
DB 182 KIDNYLKLKCRITNNNC 199

RESULT 10

US-08-737-248-11
Sequence 11, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Releasee #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989,6411P
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-11

Query Match 75.6%; Score 788; DB 2; Length 199;
Best Local Similarity 73.2%; Pred. No. 7.8e-74;

	Matches	145: Conservative	23: Mismatches	30: Indels	0: Gaps	0: Ambiguous
QY	2	PICPEGGAARCOVYTLFDLPDRAVAVLTHYIHNLSSEMFSEFDKRYTHRGRTITAINSCHTS	61			
	2					
Db	2	PVCSPGPGACGVSLRDLDFDRAVAVVSHYIHNLSSEMFNEFDKRYAOGKGITVAINLSCHTS	61			
	2					
QY	62	SLATPDEKQKQAOQNMOKDFLSIVLSIRSNWPEVHLVTEVVGMOEAPALISKAVEHEE	121			
	62	SLPTPDEDEKQAOQTHHEVLMSTIILGLRSKNDPLHLVTEVVGMOGVAPALISRALEIEE	121			
Db	62	SLPTPDEDEKQAOQTHHEVLMSTIILGLRSKNDPLHLVTEVVGMOGVAPALISRALEIEE	121			
	62					
QY	122	QTKRLLEEMELIVSQVHPETKENEIYPVWSGIPSIQMADESRLSAYYNLHCLRDSHK	181			
	122					
Db	122	ENKRLLEGEWMEIFQGVITPGAKETEPYVWSGIPSIQTXDEKADARHSAFYVNLHCLRDSK	181			
	122					
QY	182	IDNYLKLKLCRIIHNNC	199			
	182					
Db	182	IDTYLKLKLCRIIYNNC	199			
	182					

```

/ US-08-737-248-6
/ Sequence 6, Application US/08737248
/ Patent No. 6114305
/ GENERAL INFORMATION:
/ APPLICANT: Guemene, Daniel
/ APPLICANT: Zadorny, David
/ APPLICANT: Karatzas, Costas
/ TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
/ TREATING BIRD BROODINESS
/ NUMBER OF SEQUENCES: 23
/ CORRESPONDENCE ADDRESSES:
/ ADDRESSEE: WEISER & ASSOCIATES
/ STREET: 230 South Fifteenth Street, Suite 500
/ CITY: Philadelphia
/ STATE: PA
/ COUNTRY: USA
/ ZIP: 19102
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.30
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/737,248
/ FILING DATE: 28-APR-1997
/ CLASSIFICATION: 424
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: PCT/FR95/00576
/ FILING DATE: 03-MAY-1995
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: FR 94/05550
/ FILING DATE: 05-MAY-1994
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Weiser, Gerard J.
/ REGISTRATION NUMBER: 19,763
/ REFERENCE/DOCKET NUMBER: 989.6411P
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 215-875-8383
/ TELEFAX: 215-875-8394
/ INFORMATION FOR SEQ ID NO: 6:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 198 amino acids
/ TYPE: amino acid
/ STRANDEDNESS:
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ US-08-737-248-6

```

Query Match	74.7%;	Score 778.5;	DB 2;	Length 198;
Best Local Similarity	72.4%;	Pred. No. 7.5e-73;		
Matches 144;	Conservative 26;	Mismatches 28;	Indels 1;	Gaps 1.

Db 1 LPVCSGSGVGVQVSLNENLFDRAVKLSHTIHHLSSEMFNFDERYAQGRFLFTAINGCHT 60

QY 61 SSLATPEDKEAOQOQNNOKDPLSLIVSLIRSNMPELYHVLTEVRGMOAEBAILSKAVEIE 120

Db 61 SSLTTPKEKEQAOQIHHEDDLNLTVGVLRSMWDPPLHLVSEVQSIKEADPTIL-KAVEIE 119

QY 121 EOTKRLLERMELIVSQVHPETKEKEIYPVWSGLPISIQMADEESRLSAYYNLLHCLRDSH 180

Db 120 EODKRLLTGMKEKIVQVHPGEIENELYSFWSGLSESLQVDEDSRLPAFYNLHCLRDSH 179

QY 181 KIDNYLKLKCRILIHNNNC 199

Db 180 KIDNYLKLKCRILIHNNC 198

```

1      RESULT 12
2      US-08-737-248-2
3      / Sequence 2, Application US/08737248
4      / Patent No. 6114305
5      / GENERAL INFORMATION:
6      / APPLICANT: Guemene, Daniel
7      / APPLICANT: Zadworny, David
8      / APPLICANT: Karatzas, Costas
9      / TITLE OF INVENTION:  USE OF PROLACTIN FOR PREVENTING AND/OR
10     / TITLE OF INVENTION:  TREATING BIRD BROODINESS
11     / NUMBER OF SEQUENCES:   23
12     / CORRESPONDENCE ADDRESS:
13     / ADDRESSEE:  WEISER & ASSOCIATES
14     / STREET:    230 South Fifteenth Street, Suite 500
15     / CITY:      Philadelphia
16     / STATE:     PA
17     / COUNTRY:   USA
18     / ZIP:       19102
19     /
20     / COMPUTER READABLE FORM:
21     / MEDIUM TYPE:  Floppy disk
22     / COMPUTER:    IBM PC compatible
23     / OPERATING SYSTEM:  PC-DOS/MS-DOS
24     / SOFTWARE:    Patent Release #1.0, Version #1.30
25     / CURRENT APPLICATION DATA:
26     / APPLICATION NUMBER:  US/08/737,248
27     / FILING DATE:       28-APR-1997
28     / CLASSIFICATION:    424
29     / PRIOR APPLICATION DATA:
30     / APPLICATION NUMBER:  PCT/FR95/00576
31     / FILING DATE:       03-MAY-1995
32     / PRIOR APPLICATION DATA:
33     / APPLICATION NUMBER:  FR 94/05550
34     / FILING DATE:       05-MAY-1994
35     / ATTORNEY/AGENT INFORMATION:
36     / NAME:              Weiser, Gerard J.
37     / REGISTRATION NUMBER: 19,763
38     / REFERENCE/DOCKET NUMBER: 989.6411P
39     / TELECOMMUNICATION INFORMATION:
40     / TELEPHONE:         215-875-8383
41     / TELEFAX:           215-875-8394
42     / INFORMATION FOR SEQ ID NO: 2:
43     / SEQUENCE CHARACTERISTICS:
44     / LENGTH:            199 amino acids
45     / TYPE:               amino acid
46     / TOPOLOGY:          linear
47     /
48     / MOLECULE TYPE:      protein
49     /
50     / US-08-737-248-2

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Query Match	71.6%	Score 746	DB 2	Length 199
Best Local Similarity	68.3%	Pred. No. 1	86-69	
Matches 136	Conservative 30	Mismatches 33	Indels 0	Gaps 0

QY	1	LPICGGGAARQVYTRDLPBAVVLVSHYTHNLSEMESEEPKRXTHGSGFTITKANSGHT	60
Db	1	LPICGGGVNCQVSIGELPDRVRSHTIHPLSLSEIFNEFBRKIAQSGFTITKANSGHT	60
QY	61	SSLATPEDEKEQAQOMNQDPLSLVSIIRSNNEPPLVTHLVTEKRGMOEAPALISKAVETI	120

Db 61 SLLTTEDEKQVQOIHHEELNLIICGLVRSMNDPIHLASEVQRIKELPDIILMKAYEIE 120

QY 121 EQTKRLLERMELIVSQVHPETKENETIPVWSGLPSLOMADEBSRLSAYNLIHLGRDSDH 180

Db 121 EQTKRLLEGMKEIKVGRILHSGDAGNEVFSQMDPLSLOADEBSRLSFAVYNLIHLGRDSDH 180

QY 181 KIDNYLKLKLCRIIHNNNC 199

Db 181 KIDNYLKLKLCRIIHNNNC 199

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RESULT 13
US-08-737-248-4
Sequence 4, Application US/08737248
Parent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadowny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737, 248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989, 6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 426 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-4

Query Match          71.6%; Score 746; DB 2; Length 426;
Best Local Similarity 68.3%; Pred. No. 5.3e-69;
Matches 136; Conservative 30; Mismatches 33; Indels 0; Gaps 0

QY      1 LPICPGAARCOVTLRDLPRAVLVSHYHNLSSEMFSEPDKXTHRGRTITAINSCHT 60
        |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
DB      228 LPICSGSVNCQVSLSBELFDRAVRLSHYHPLSSIFNEPDERRYAOGEGITAAVNGCHT 287
        |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||

QY      61 SSLATGEDEDKROAQNMOKDFLSVISLRSMNPLVHLVEYVGMDPAFAIISKAVEIE 120
        ::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
DB      288 SSITTEDDEKQTQIHHEELINLLIVLRSMNDPLIHLAEVQRIRIKAPTILMKAVEIE 347
        ::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||

QY      121 EOTKRLLERNELLIVSOVHPETKENEIVPVMSGLPISLOMADESRLSYNNLLCLRRDSH 180

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Db 348 EQKRLLEGMEXIVGRSHSGDAGNEVFSPQMDGLPSLQLADEDSRLFAFYNIHLCLRDSH 407
 QY 181 KIDNYLKLLKCRIRIHNNC 199
 Db 408 KIDNYLKVLKCRLLIHNNC 426

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RESULT 14
US-08-737-248-5
; Sequence 5, Application US/08737248
; Patent No. 6114305
; GENERAL INFORMATION:
; APPLICANT: Guemene, Daniel
; APPLICANT: Zadworny, David
; APPLICANT: Karatzas, Costas
; TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
; TITLE OF INVENTION: TREATING BIRD BROODINESS
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WEISER & ASSOCIATES
; STREET: 230 South Fifteenth Street, Suite 500
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/737,248
; FILING DATE: 28-APR-1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/PR95/00576
; FILING DATE: 03-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 94/05550
; FILING DATE: 05-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weiser, Gerard J.
; REGISTRATION NUMBER: 19,763
; REFERENCE/DOCKET NUMBER: 989,6411P
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 215-875-8383
; TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
;
US-08-737-248-5

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	Query Match	71.0%	Score 740;	DB 2;	Length 199;	
	Best Local Similarity	69.8%;	Pred. No. 7.6e-69;			
	Matches 139;	Conservative 27;	Mismatches 33;	Indels 0;	Gaps 0	
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		: : : : :				
		: : : : :				
Db	1	LPICIGSNQCVELSGELFDRAVKLSHIYHLSSEIFNEFDERYAQGRGITKAVNGCHT	60			
Qy	61	SSLATPEDKEQAQQNNKKDPLSLIYSILRSNAPLYHLVTFRKGQDAPEALISKAVEE	120			
		: : : : :				
		: : : : :				
Db	61	SSTLTTPDEDEQAQQIHHEDLNLVVGVVLRVNMDPLTHLASEQRKEADDTLLMKAVEE	120			
Qy	121	EQTXXLLMEMLIVSQVHPETKENETIPYWSGLPSIQMADEBSRLSAYANLJHCIRDSH	180			
Db	121	EONKRLLEMEKI VGVVSHGHAAGNETIYHSDELPSIQLADEBSRLPAPFNLLHCHRDSH	180			

QY 181 KIDNYLKLKCRRIHNNNC 199
DB 181 KIDNYLKLKCRRLIHDSNC 199

Search completed: January 6, 2006, 14:33:55
Job time : 52 secs

RESULT 15

US-08-737-248-9
Sequence 9, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadworny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 42A
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989.6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-9

Query Match 70.0%; Score 729; DB 2; Length 199;

Best Local Similarity 65.3%; Pred No. 11e-67; Mismatches 33; Indels 0; Gaps 0;

DB 100 LPICPGAGARCOVTLRDLFDRAVVLISHYIHNLSSEMFSEFDRKYTHGRGFTTKAINSCHT 60
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QY 61 SSLATPEDEKQAQONQKDFLSLIVISILRSWNEPLVHLYTEVRGMQEAPEALISKAVEIE 120
DB 61 SSISTPEBKDAQOQTHHEVLMDLILGLRSWMDPLDHLASEVHSLPKAPSAALTATKATEVK 120
QY 121 EOTKRLLERMELIVSQVHPETKENEIYPVWSGLPSILOMADESRSL SAYYNLHCLRRDSH 180
DB 121 BENQRLLEIGIEKIVDAQVHGAKENKAYVWSGLPSILOTTDEDAKLP AFYNLFRCLRRDSH 180
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 181 KIDNYLKLKCRRLIHDSNC 199

Protein Sequence Searches - February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.
- If you encounter an accession number from an older search run against UniProt (results file extension **.rup**) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (UniPARC) at:

<http://www.pir.uniprot.org/database/archive.shtml>

If you have any questions regarding this information or your results, please contact any STIC searcher.

When submitting sequence search results for scanning into IFW, please include a copy of this attachment to assist any future Examiners or members of the public who may encounter UniProt temporary accession numbers.

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:21:44, Search time 230 Seconds

(without alignments)
610.435 Million cell updates/sec

Title: US-09-815-306A-34

Perfect score: 1042
Sequence: 1 LPICPGAGARCVTLRLD.....HKIDNYLKLKCRITHHNNC 199

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database: uniprot_05.80.*
1: uniprot_sprot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1035	99.3	227	1 PRL_HUMAN	P01236 homo sapien
2	1035	99.3	227	2 Q5TRQ0_HUMAN	Q5TRQ0 homo sapien
3	1035	99.3	228	2 Q510G2_HUMAN	Q510G2 homo sapien
4	1021	98.0	217	2 Q52Z59_MACMU	Q52Z59 macaca mula
5	1021	98.0	227	1 PRL_MACMU	P55151 macaca mula
6	1018	97.7	217	2 Q52Z60_9PRIM	Q52Z60 trachypithe
7	1006	96.5	199	2 Q9TS41_9PRIM	Q9TS41 papio (dabo
8	994	95.4	217	2 Q52Z58_PITPI	Q52Z58 pithecia pi
9	969	93.0	217	2 Q6A190_CALJA	Q6A190 callithrix
10	889	85.3	220	2 Q6A1B8_NICPY	Q6A1B8 nycticebus
11	879	84.4	199	1 PRL_CAMR	P22393 camelus dro
12	872	83.7	229	1 PRL_PIG	P01238 sus scrofa
13	871	83.6	229	1 PRL_HORSE	P12420 equus caball
14	870	83.5	229	1 PRL_AILME	P08X61 ailuropoda
15	869	83.4	229	1 PRL_MUSVI	P29234 musstela vis
16	866	83.1	227	1 PRL_RABIT	Q28632 oryctolagus
17	859	82.4	229	1 PRL_PELCA	P46403 felis silve
18	856	82.1	199	1 PRL_BALEO	P33089 balanopter
19	849	81.5	228	1 PRL_TRIUV	Q62781 trichosurus
20	839	80.5	228	1 PRL_MONDO	Q62819 monodelphis
21	830	79.7	222	2 Q8T110_9CEST	Q8T110 taenia hyda
22	822	78.9	215	2 Q66LM9_TRIUV	Q66LM9 trichosurus
23	795	76.3	229	1 PRL_CERGL	Q66C74 cervus elap
24	790	75.8	229	1 PRL_CAPII	Q28318 capra hircu
25	789	75.7	229	1 PRL_BOVIN	P01239 bos taurus
26	788	75.6	229	1 PRL_SHEEP	P01300 ovine aries
27	782.5	75.1	198	1 PRL_CHEMY	P33090 chelonis my
28	775	74.4	229	2 Q616F6_EUBMA	Q616F6 eublepharis
29	773	74.2	219	2 Q6PH02_GAVES	Q6PH02 anser anser
30	773	74.2	229	2 Q6PLT3_GAVES	Q6PLT3 anser anser
31	769	73.8	199	1 PRL2_ALIMI	P53752 alligator m

32	769	73.8	229	2 Q75RW5_ANAPL	Q75RW5 anas platyr
33	768	73.7	199	1 PRL2_CRONO	P55754 crocodylus
34	765	73.4	229	2 Q6PLT4_GAVES	Q6PLT4 anser anser
35	764	73.3	199	1 PRL2_ALIMI	P55751 alligator m
36	763	73.2	199	1 PRL1_CRONO	P55753 crocodylus
37	763	73.2	229	2 Q52PE0_9AVES	Q52PE0 anser anser
38	762	73.1	229	1 PRL_CHICK	P14676 gallus gall
39	757	72.6	229	2 Q75QK4_COTCO	Q75QK4 coturnix co
40	746	71.6	229	1 PRL_MELGA	P17572 meleagris g
41	744	71.4	233	2 Q7T1A5_9SALA	Q7T1A5 amyotoma b
42	729	70.0	199	1 PRL_LOXAF	P10765 loxodonta a
43	710	68.1	230	2 Q6DJG3_XENLA	Q6DJG3 xenopus lae
44	686	65.8	230	2 Q56A64_XENLA	Q56A64 xenopus lae
45	682.5	65.5	214	2 Q8JFX6_PANCA	Q8JFX6 rana catesb

ALIGNMENTS

RESULT 1
PRL_HUMAN STANDARD; PRT; 227 AA.
AC P01236; Q15199; Q92996;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Proactin precursor (PRL).
GN Name=PRL;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo
OX NCBI_TaxID=9606;
RN (1)
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=81168179; PubMed=6260780;
RA Cooke N.E., Coit D., Shine J., Baxter J.D., Martial J.A.;
RT "Human proactin. cDNA structural analysis and evolutionary
comparisons.";
RT J. Biol. Chem. 256:4007-4016(1981).
RN (2)
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=84182507; PubMed=6325171;
RA Truong A.T., Duez C., Belayew A., Renard A., Pictet R.L., Bell G.I.,
Martial J.A.;
RT "Isolation and characterization of the human proactin gene.";
RN EMBL J. 3:429-437(1984).
RN (3)
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=91267286; PubMed=2050267; DOI=10.1016/0303-7207(91)90247-P;
RA Hiraoka Y., Tatem K., Shiozawa M., Aiso S., Fukasawa T., Yasuda K.,
Miyai K.;
RT "A placenta-specific 5'non-coding exon of human proactin.";
RN Mol. Cell. Endocrinol. 75:71-80(1990).
RN (4)
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Testis;
RP MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klauser R.D., Collins P.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Bueltow K.H., Schaefer C.F., Hsieh F.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Halel F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Cassavani T.L., Scheetz T.E.,
Brownstein M.J., Uddin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
Bosak S.A., McKernan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahy J., Hulton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Butterfield V.S.N., Krzywicki M.I., Skalska U., Smalins D.E.,
 RA Scherch A., Schein J.E., Jones S.J.M., Matra M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences.";
 RN Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RP NUCLEOTIDE SEQUENCE OF 11-227.
 RX MEDLINE=84264464; PubMed=6146607;
 RA Takahashi H., Nabeshima Y., Nabeshima Y., Ogata K., Takeuchi S.,
 RT "Molecular cloning and nucleotide sequence of DNA complementary to
 RT human decidual prolactin mRNA.";
 RL J. Biochem. 95:1491-1499(1984).
 RP NUCLEOTIDE SEQUENCE OF 11-201.
 RC TISSUE=Mammary gland;
 RX MEDLINE=97411082; PubMed=9266104; DOI=10.1023/A:1005879103367;
 RA Shaw-Bruba C.M., Pirrucci S.J., Shull J.D.,
 RT "Expression of the prolactin gene in normal and neoplastic human
 RT breast tissues and human mammary cell lines: promoter usage and
 RT alternative mRNA splicing.";
 RL Breast Cancer Res. Treat. 44:243-253(1997).
 RP PROTEIN SEQUENCE OF 29-227.
 RX MEDLINE=78046207; PubMed=925136;
 RA Shome B., Parlow A.F.,
 RT "Human pituitary prolactin (hPRL): the entire linear amino acid
 RT sequence.";
 RL J. Clin. Endocrinol. Metab. 45:1112-1115(1977).
 RP PROTEIN SEQUENCE OF 29-53.
 RX MEDLINE=75151509; PubMed=1126929;
 RA Jacobs J.W., Niall H.D.,
 RT "High sensitivity automated sequence determination of polypeptides.";
 RL J. Biol. Chem. 250:3629-3636(1975).
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by
 CC promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC -1- CAUTION: Ref.3 sequence differs from that shown due to a
 CC frameshift in position 8.
 CC
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC
 CC EMBL, V00566; CAA23829.1; -; mRNA.
 DR EMBL, X00540; CAA25214.1; -; Genomic_DNA.
 DR EMBL, X00541; CAA25214.1; JOINED; Genomic_DNA.
 DR EMBL, X00543; CAA25214.1; JOINED; Genomic_DNA.
 DR EMBL, X00544; CAA25214.1; JOINED; Genomic_DNA.
 DR EMBL, X54393; CAA38263.1; ALT_FRAME; mRNA.
 DR EMBL, X54393; CAA38264.1; ALT_FRAME; mRNA.
 DR EMBL, BC015850; AAH15850.1; -; mRNA.
 DR EMBL, M29386; AAA60173.1; -; mRNA.
 DR EMBL, D00411; BAA00312.1; -; mRNA.
 DR EMBL, U75583; AAB70858.1; -; mRNA.
 DR PIR, A80998; LCHU.
 DR PDB, 1N9D; NMR; A=29-227.
 DR PDB, 1RW5; NMR; A=29-227.
 DR Ensembl, ENSG00000172179; Homo sapiens.
 DR HGNC, HGNC:9445; PRL.
 DR H-InvDB, HIX0005617; -.
 DR MIM, 176760; -.
 DR GO, GO:0005146; P:prolactin receptor binding; TAS.
 DR GO, GO:0008283; P:cell proliferation; TAS.
 DR GO, GO:0007166; P:cell surface receptor linked signal transdu. . .; TAS.
 DR GO, GO:0007516; P:hemocyte development; TAS.
 DR GO, GO:0007565; P:pregnancy; NAS.
 DR InterPro, IPR012351; Cytokine 4 hlx.
 DR InterPro, IPR001400; Somatotropin.
 DR PANTHER, PTHR11417; Somatotropin; 1.

DR Pfam; PF00103; Hormone_1; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW 3D-structure; Direct protein sequencing; Glycoprotein; Hormone;
 KW Lactation; Pituitary; Signal.
 FT SIGNAL 1
 FT CHAIN 29
 FT CARBOHYD 59
 FT DISULFID 32
 FT DISULFID 36
 FT DISULFID 219
 FT DISULFID 227
 FT CONFLICT 42
 FT CONFLICT 110
 FT CONFLICT 111
 FT CONFLICT 113
 FT CONFLICT 118
 FT CONFLICT 148
 FT CONFLICT 172
 FT CONFLICT 190
 FT CONFLICT 191
 FT CONFLICT 206
 FT CONFLICT 206
 SQ SEQUENCE 227 AA; 25876 MW; 952BBA1B6A55527 CRC64;
 Query Match 99.3%; Score 1035; DB 1; Length 227;
 Best Local Similarity 99.5%; Pred. No. 4.9e-73;
 Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 LPICGGAAACQVTLRLPFRAYVLSHYINLSSEMFSEDPKRYTHRGFTTKAINSGHT 60
 DB 29 LPICGGAAACQVTLRLPFRAYVLSHYINLSSEMFSEDPKRYTHRGFTTKAINSGHT 88
 QY 61 SSLATPDKQAOQMOQKDFSLIVSLRSWNEPLVLYLTVENVGQAPALISKAVEIE 120
 DB 89 SSLATPDKQAOQMOQKDFSLIVSLRSWNEPLVLYLTVENVGQAPALISKAVEIE 148
 QY 121 EQRRLRLERMLIVSQVHPETKENEIYVWGLPSLQMADEESRLAYNLLHCLRDSH 180
 DB 149 EQRRLRLERMLIVSQVHPETKENEIYVWGLPSLQMADEESRLAYNLLHCLRDSH 208
 QY 181 KIDNYLKLKCRITHHNNC 199
 DB 209 KIDNYLKLKCRITHHNNC 227
 RESULT 2
 QSTH00 HUMAN PRELIMINARY; PRT; 227 AA.
 ID QSTH00 HUMAN PRELIMINARY; PRT; 227 AA.
 AC QSTH00;
 DT 01-FEB-2005 (TREMBLrel. 29, Created)
 DT 01-FEB-2005 (TREMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TREMBLrel. 29, Last annotation update)
 DE Prolactin.
 GN Name=PRL; ORFNames=RP3-404K8.1-001;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
 OC Homo.
 OC NCBI_TaxID=9606;
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Nickerson T.;
 RT Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
 DR EMBL; AL023883; CAI20469.1; -; Genomic_DNA.
 DR Ensembl; ENSG00000172179; Homo sapiens.
 DR GO; GO:0005176; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR012351; Cytokine 4 hlx.
 DR InterPro; IPR001400; Somatotropin.
 DR Pfam; PF00103; Hormone_1; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW Hormone.

SO SEQUENCE 227 AA; 25876 MW; 952BBAB6A955527 CRC64;
Query Match 99.3%; Score 1035; DB 2; Length 227;
Best Local Similarity 99.5%; Pred. No. 4,9e-73;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICPGAGACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 29 LPICPGAGACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 88
QY 61 SSLATPDEKQAOQNMOKDFLSLIVSLRSWNEPLYHLVTEVRGMQEAPEALISKAVEIE 120
DB 89 SSLATPDEKQAOQNMOKDFLSLIVSLRSWNEPLYHLVTEVRGMQEAPEALISKAVEIE 148
QY 121 EOTKRLERMEILVSGVHPETKENETIYPWVSGLPISLOMADEESRLSAYYNLHLCURDSH 180
DB 149 EOTKRLERMEILVSGVHPETKENETIYPWVSGLPISLOMADEESRLSAYYNLHLCURDSH 208
QY 181 KIDNYLKLLKCRRIHNNNC 199
DB 209 KIDNYLKLLKCRRIHNNNC 227
RESULT 3
OS10G2 HUMAN PRELIMINARY; PRT; 228 AA.
AC 0510G2;
DT 10-MAY-2005 (TReMBLrel. 30, Created)
DT 10-MAY-2005 (TReMBLrel. 30, Last sequence update)
DT 10-MAY-2005 (TReMBLrel. 30, Last annotation update)
DE Proactin.
GN Name=PRU;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homiidae;
OC Homo.
OX NCBI_TaxID=9606;
RN (1)
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Pituitary;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Collins E.A., Grose L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner C.M., Schuler G.D.,
RA Altschul S.F., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heile F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.W., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ueda T.B., Tohyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McKernan K.J., Malek J.A., Gumaratne P.H.,
RA Richard S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny K.C., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko J., Bouffard G.G.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywiński M.I., Skalka U., Smallue D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN (2)
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Pituitary;
RA Director MGC Project;
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
CC 1- SUBCELLULAR LOCATION: Secreted (By similarity).
DR EMBL: BC088370; AA88370.1; -; mRNA.
DR GO: 0005576; C:extracellular region; IEA.
DR GO: 0005179; F:hormone activity; IEA.
DR InterPro: IPR012351; Cytokine_4_hlx.
DR InterPro: IPR001400; Somatotropin.

DR PANTHER: PTHR11417; Somatotropin; 1.
DR Pfam: PF00103; Hormone_1; 1.
DR PRINTS: PR00836; SOMATOTROPIN.
DR PROSITE: PS00266; SOMATOTROPIN_1; 1.
DR PROSITE: PS00338; SOMATOTROPIN_2; 1.
DR Hormone.
SO SEQUENCE 228 AA; 25947 MW; C592E517CB186E42 CRC64;
Query Match 99.3%; Score 1035; DB 2; Length 228;
Best Local Similarity 99.5%; Pred. No. 4,9e-73;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICPGAGACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 30 LPICPGAGACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 89
QY 61 SSLATPDEKQAOQNMOKDFLSLIVSLRSWNEPLYHLVTEVRGMQEAPEALISKAVEIE 120
DB 90 SSLATPDEKQAOQNMOKDFLSLIVSLRSWNEPLYHLVTEVRGMQEAPEALISKAVEIE 149
QY 121 EOTKRLERMEILVSGVHPETKENETIYPWVSGLPISLOMADEESRLSAYYNLHLCURDSH 180
DB 150 EOTKRLERMEILVSGVHPETKENETIYPWVSGLPISLOMADEESRLSAYYNLHLCURDSH 209
QY 181 KIDNYLKLLKCRRIHNNNC 199
DB 210 KIDNYLKLLKCRRIHNNNC 228
RESULT 4
OS52259 MACMU PRELIMINARY; PRT; 217 AA.
AC 052259;
DT 13-SEP-2005 (TReMBLrel. 31, Created)
DT 13-SEP-2005 (TReMBLrel. 31, Last sequence update)
DT 13-SEP-2005 (TReMBLrel. 31, Last annotation update)
DE Proactin (Fragment).
GN Name=PRU;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopitheinae; Macaca.
OX NCBI_TaxID=9544;
RN (1)
RP NUCLEOTIDE SEQUENCE.
RA Li Y., Zhang Y.P.;
RT "Molecular evolution of prolactin gene in higher primate.";
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL: AY851384; AX99164.1; -; Genomic_DNA.
DR EMBL: AY851381; AX99164.1; JOINED; Genomic_DNA.
DR EMBL: AY851382; AX99164.1; JOINED; Genomic_DNA.
DR EMBL: AY851383; AX99164.1; JOINED; Genomic_DNA.
DR GO: 0005576; C:extracellular region; IEA.
DR GO: 0005179; F:hormone activity; IEA.
DR InterPro: IPR012351; Cytokine_4_hlx.
DR InterPro: IPR001400; Somatotropin.
DR Pfam: PF00103; Hormone_1; 1.
DR PRINTS: PR00836; SOMATOTROPIN.
DR PROSITE: PS00266; SOMATOTROPIN_1; 1.
DR PROSITE: PS00338; SOMATOTROPIN_2; 1.
DR Hormone.
KW NON TER
FT
SO SEQUENCE 217 AA; 24873 MW; C45352CF5CAFC991 CRC64;
Query Match 98.0%; Score 1021; DB 2; Length 217;
Best Local Similarity 97.5%; Pred. No. 5,8e-72;
Matches 194; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 LPICPGAGACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 19 LPICPGAGACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHT 78
QY 61 SSLATPDEKQAOQNMOKDFLSLIVSLRSWNEPLYHLVTEVRGMQEAPEALISKAVEIE 120

```
Db 79 SSLPTPDKQAQOMQKDFSLIVSLIRSNMNEPLVHLYTEVRGMEAPPAIILSKAVEIE 138
Qy 121 EQTKRLIERMELIVSQVHPETKENEIYPVWSGLPSLOMADEESRLSAAYNNLHCLRDSDH 180
Db 139 EQTKRLIEGMELIVSQVHPETKENEIYPVWTGTPSLQMADEESRLSAAYNNLHCLRDSDH 198
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 199 KIDNYLKLKCRITIHNNNC 217

RESULT 5
PRL_MACMU STANDARD; PRT; 227 AA.
ID PRL_MACMU
AC PSL1S1;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Prolactin precursor (PRL).
GN Name=PRL;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheciidae; Cercopitheciinae; Macaca.
OX NCBI_TaxID=9544;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Decidua;
RX MEDLINE=94220570; PubMed=8167226;
RA Brown N.A.; Bethea C.L.;
RT "Cloning of decidal prolactin from rhesus macaque.";
RL Biol. Reprod. 50:543-552(1994).
CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by
CC -1- promoting lactation.
CC -1- SUBCELLULAR LOCATION: secreted.
CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; U09018; AAA18471.1; -; mRNA.
DR HSSP; P01236; INSD.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR01400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
DR Glycoprotein; Hormone; Lactation; Pituitary; signal.
FT SIGNAL 1 28 By similarity.
FT CHAIN 29 227 Prolactin.
FT CARBOHD 59 59 N-linked (GLNcnc. . .) (Potential).
FT DISULFD 32 39 By similarity.
FT DISULFD 86 202 By similarity.
FT DISULFD 219 227 By similarity.
SQ SEQUENCE 227 AA; 25972 MW; 1B6B25E087C401E4 CRC64;

Query Match 98.0%; Score 1021; DB 1; Length 227;
Best Local Similarity 97.5%; Pred. No. 6,1e-72;
Matches 194; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
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Qy 121 EQTKRLIERMELIVSQVHPETKENEIYPVWSGLPSLOMADEESRLSAAYNNLHCLRDSDH 180
Db 149 EQTKRLIEGMELIVSQVHPETKENEIYPVWTGTPSLQMADEESRLSAAYNNLHCLRDSDH 208
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 209 KIDNYLKLKCRITIHNNNC 227

RESULT 6
Q52260_9PRIM PRELIMINARY; PRT; 217 AA.
ID Q52260_9PRIM
AC Q52260;
DT 13-SEP-2005 (TREMBlrel. 31, Created)
DT 13-SEP-2005 (TREMBlrel. 31, Last sequence update)
DT 13-SEP-2005 (TREMBlrel. 31, Last annotation update)
DE Prolactin (Fragment).
GN Name=PRL;
OS Trachypithecus leucocephalus (white-headed langur).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheciidae; Colobinae; Trachypithecus.
OX NCBI_TaxID=61617;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Li Y., Zhang Y.P.;
RT "Molecular evolution of prolactin gene in higher primate.";
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY851380; AAX99163.1; -; Genomic DNA.
DR EMBL; AY851377; AAX99163.1; JOINED; Genomic DNA.
DR EMBL; AY851378; AAX99163.1; JOINED; Genomic DNA.
DR EMBL; AY851379; AAX99163.1; JOINED; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR01400; Somatotropin.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
DR Hormone.
KW NON TER.
SQ SEQUENCE 217 AA; 24856 MW; 4F8FABFD66EB02B4 CRC64;

Query Match 97.7%; Score 1018; DB 2; Length 217;
Best Local Similarity 97.0%; Pred. No. 1e-71;
Matches 193; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
```


DE prolactin.
OS Papio (baboon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopitheciinae.
OX NCBI_TaxID=9554;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=92037387; PubMed=1935793;
RA Cole E.S., Nichols E.H., Lauziere K., Edmunds T., McPherson J.M.;
RT "Characterization of the microheterogeneity of recombinant primate
prolactin: implications for posttranslational modifications of the
RT hormone in vivo."; 129:2639-2646(1991).
RL Endocrinology 129:2639-2646(1991).
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
DR HSP; P01236; INSD.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR Pfam; PF00103; Somatotropin; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone.
SQ SEQUENCE 199 AA; 22850 MW; 872A8935FEA43B67 CRC64;

Query Match 96.5%; Score 1006; DB 2; Length 199;
Best Local Similarity 96.0%; Pred. No. 7,9e-71;
Matches 191; Conservative 5; Mismatches 3; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
DB 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60

QY 61 SSLATPEDEKQAOQNOQKDFSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 120
DB 61 SSLATPEDEKQAOQNOQKDFSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 120

QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLFAYYNLHCLRRDSH 180
DB 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLFAYYNLHCLRRDSH 180

QY 181 KIDNYLKLKCRRIHNNNC 199
DB 181 KIDNYLKLKCRRIHNNNC 199

RESULT 8
052258 PITPI PRELIMINARY; PRT; 217 AA.
AC 052258
DT 13-SEP-2005 (TREMBlrel. 31, Created)
DT 13-SEP-2005 (TREMBlrel. 31, Last sequence update)
DT 13-SEP-2005 (TREMBlrel. 31, Last annotation update)
DE Prolactin (Fragment).
GN Name=prl;
OS Pithcheia pithcheia (White-faced saki).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Pithcheiinae; Pithcheia.
OX NCBI_TaxID=43777;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Li Y., Zhang Y.P.;
RT "Molecular evolution of prolactin gene in higher primate.";
RT Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY851388; AAX99162.1; -; Genomic DNA.
DR EMBL; AY851385; AAX99162.1; JOINED; Genomic DNA.
DR EMBL; AY851387; AAX99162.1; JOINED; Genomic DNA.
GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone.
FT NON TER.
SQ SEQUENCE 217 AA; 24757 MW; FDB0ACE784F93624 CRC64;

Query Match 95.4%; Score 994; DB 2; Length 217;
Best Local Similarity 95.0%; Pred. No. 7,6e-70;
Matches 189; Conservative 6; Mismatches 4; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
DB 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 78

QY 61 SSLATPEDEKQAOQNOQKDFSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 120
DB 79 SSLATPEDEKQAOQISQDFSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 138

QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLFAYYNLHCLRRDSH 180
DB 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLFAYYNLHCLRRDSH 198

QY 181 KIDNYLKLKCRRIHNNNC 199
DB 181 KIDNYLKLKCRRIHNNNC 217

RESULT 9
06A190 CALJA PRELIMINARY; PRT; 217 AA.
AC 06A190;
DT 25-OCT-2004 (TREMBlrel. 28, Created)
DT 25-OCT-2004 (TREMBlrel. 28, Last sequence update)
DT 25-OCT-2004 (TREMBlrel. 28, Last annotation update)
DE Prolactin precursor (Fragment).
GN Name=prl;
OS Callithrix jacchus (Common marmoset).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini;
OC Callitrichidae; Callitrix.
OX NCBI_TaxID=9483;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX PubMed=15983870; DOI=10.1007/s00239-004-0239-9;
RA Wallis O.C., Mac-Kwaahle A., Naki G., Wallis M.;
RT "Molecular evolution of prolactin in primates.";
RT J. Mol. Evol. 60:606-614(2005).
DR EMBL; AJ786353; CAH05221.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone; Signal.
FT SIGNAL <1 18 Potential.
FT CHAIN 19 217 prolactin.
FT NON TER 1
SQ SEQUENCE 217 AA; 24843 MW; 342852DE9DC64B48 CRC64;

Query Match 93.0%; Score 969; DB 2; Length 217;
Best Local Similarity 91.0%; Pred. No. 6,9e-68;
Matches 181; Conservative 12; Mismatches 6; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60

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Db      | 19 | LPVCGGAAVACQVTLRDLFDRAVLISHYIHNLSSEMFSEDPKRTQGRGFTSKALNSCHT 78
Qy      | 61 | SSLATPEDKEQAQMNQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIVE 120
Db      | 79 | SSLATPEDKEQAQISQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIEIE 138
Qy      | 121 | EGTKRLERMEELIVSQVHPETKENIYFVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
Db      | 139 | EOSKRLLEGMEELISQVHPETRENAVYSVWSGLPSLQMADEBSRLFAVYNLLHCLRDSDH 198
Qy      | 181 | KIDNYLKLKCRRIHNNNC 199
Db      | 199 | KIDNYLKLKCRRIHNNNC 217

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RESULT 10

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06A1B8_NYCPY PRELIMINARY; PRT; 220 AA.
ID 06A1B8_NYCPY PRELIMINARY; PRT; 220 AA.
AC 06A1B8;
DT 25-OCT-2004 (TREMBlrel. 28, Created)
DT 25-OCT-2004 (TREMBlrel. 28, Last sequence update)
DT 25-OCT-2004 (TREMBlrel. 28, Last annotation update)
DE prolactin precursor (Fragment).
CN Name=prl;
OS Nucleobus pygmaeus (Pygmy slow loris).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Strepsirrhini; Loridae;
OC Nucleobus.
OC Nucleobus.
OX NCBI_TaxID=101278;
RN [1]
NP NUCLEOTIDE SEQUENCE.
RP PubMed=15983870; DOI=10.1007/s00239-004-0239-9;
RX Wallis O.C., Mac-Kwashie A., Makri G., Wallis M.;
RT "Molecular evolution of prolactin in primates.";
RL J. Mol. Evol. 60:606-614 (2005).
DR EMBL; AJ784991; CAH05020.1; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone; Signal.
FT SIGNAL 1..21 potential.
FT CHAIN 22..220 prolactin.
FT NON_TER 1..1
SQ SEQUENCE 220 AA; 25214 MW; 03D1BF68BA177B6 CRC64;

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Query Match 85.3%; Score 889; DB 2; Length 220;
 Best Local Similarity 81.4%; Pred. No. 1.3e-61;
 Matches 162; Conservative 23; Mismatches 14; Indels 0; Gaps 0;

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Qy      | 1 | LPICGGAACQVTLRDLFDRAVLISHYIHNLSSEMFSEDPKRTYHGGFTTKAINSCHT 60
Db      | 22 | LPICGGAACQVSLRDLFDRAVLISHYIHNLSSEMFSEDPKRYAOGGFTTKAINSCHT 81
Qy      | 61 | SSLATPEDKEQAQMNQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIVE 120
Db      | 82 | SSLATPEDKEQAQOIHHEDLLNLVLRVLRSWNDPLYHLVTEVRGQGAPEALISKAIEIE 141
Qy      | 121 | EGTKRLERMEELIVSQVHPETKENIYFVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
Db      | 142 | EONKRLERMEELIVSQVHPETRENAVYSVWSGLPSLQMADEBSRLFAVYNLLHCLRDSDH 201
Qy      | 181 | KIDNYLKLKCRRIHNNNC 199
Db      | 202 | KIDNYLKLKCRRIHNNNC 220

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PRL_CAMDR STANDARD; PRT; 199 AA.
ID PRL_CAMDR
AC P22393;
DT 01-AUG-1991 (Rel. 19, Created)
DT 01-AUG-1991 (Rel. 19, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Prolactin (PRL).
CN Name=PRL;
OS Camelus dromedarius (Dromedary) (Arabian camel).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Tylopoda;
OC Camelidae; Camelus.
OX NCBI_TaxID=9838;
RN [1]
NP PROTEIN SEQUENCE, AND CARBOHYDRATE-LINKAGE SITE.
RP MEDLINE=91230144; PubMed=2029533; DOI=10.1016/0167-4838(91)90549-F;
RX Martinat N., Huet J.-C., Nespoulous C., Combarnous Y.;
RA Martinat N., Huet J.-C.;
RT "Determination of the primary and secondary structures of the dromedary (Camelus dromedarius) prolactin and comparison with prolactins from other species";
RL Biochim. Biophys. Acta 1077:339-345 (1991).
RN [2]
NP PROTEIN SEQUENCE OF 1-40.
RP TISSUE=pituitary;
RX PubMed=2085952;
RA Martinat N., Anouassi A., Huet J.C., Pernollet J.C., Combarnous Y.;
RT "Purification and characterization of glycosylated and non-glycosylated forms of prolactin from the dromedary (Camelus dromedarius).";
RT Comp. Biochem. Physiol. 97B:667-674 (1990).
RL Comp. Biochem. Physiol. 97B:667-674 (1990).

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-1- FUNCTION: Prolactin acts primarily on the mammary gland by promoting lactation.
 -1- SUBCELLULAR LOCATION: Secreted.
 -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.

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CC PIR; S15131; S15131.
DR HSPSP; P01236; 1N9D.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Direct protein sequencing; Glycoprotein; Hormone; Lactation; Pituitary.
FT CARBOHYD 31..31 N-linked (GlcNAc . .); partial.
FT DISULFID 4..11
FT DISULFID 58..174
FT DISULFID 191..199
SQ SEQUENCE 199 AA; 22971 MW; EA382B98C4585B19 CRC64;

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Query Match 84.4%; Score 879; DB 1; Length 199;
 Best Local Similarity 80.9%; Pred. No. 7e-61;
 Matches 161; Conservative 22; Mismatches 16; Indels 0; Gaps 0;

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Qy      | 1 | LPICGGAACQVTLRDLFDRAVLISHYIHNLSSEMFSEDPKRTYHGGFTTKAINSCHT 60
Db      | 1 | LPICGGAACQVSLRDLFDRAVLISHYIHNLSSEMFSEDPKRYAOGGFTTKAINSCHT 60
Qy      | 61 | SSLATPEDKEQAQMNQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIVE 120
Db      | 61 | SSLATPEDKEQAQOIHHEDLLNLVLRVLRSWNDPLYHLVTEVRGQGAPEALISKAIEIE 120
Qy      | 121 | EGTKRLERMEELIVSQVHPETKENIYFVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180

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Db 121 EONKRLGEMKIVQVHPGIVENETIYSWGLPSIQMADEDTRLFAPFNLHLCRRDSH 180
 Qy 181 KIDNYLKLLKCRRIHNNC 199
 Db 181 KIDNYLKLLKCRRIYDSNC 199

RESULT 12

PRL_PIG STANDARD; PRT; 229 AA.
 ID PRL_PIG
 AC P01338;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-OCT-1994 (Rel. 30, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Prolactin precursor (PRL).
 GN Name=PRL;
 OS Sus crofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
 OC Sub.
 OX NCBI_TaxID=9823;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA MEDLINE=89263739; PubMed=2726463;
 RA Schulz Aellen M.F., Schmid E., Moyva R.N.;
 RT "Nucleotide sequence of porcine preprolactin cDNA."
 RL Nucleic Acids Res. 17:3295-3295 (1989).
 RN [2]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA MEDLINE=90262633; PubMed=2344390;
 RA Kato Y., Hirai T., Kato T.;
 RT "Molecular cloning of cDNA for porcine prolactin precursor."
 RL J. Mol. Endocrinol. 4:135-142 (1990).
 RN [3]
 RP PROTEIN SEQUENCE OF 31-229.
 RA MEDLINE=76189476; PubMed=1270193;
 RA Li C.H.;
 RT "Studies on pituitary lactogenic hormone. The primary structure of the
 RT porcine hormone."
 RL Int. J. Pept. Protein Res. 8:205-224 (1976).
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by
 CC promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC EMBL, X14068, CAA32231.1; -, mRNA.
 DR PIR, S04077; LCPG.
 DR HSSP, P01236; INPD.
 DR InterPro, IPR012351; Cytokine_4_hlx.
 DR InterPro, IPR001400; Somatotropin.
 DR PANTHER, PTHR11417; Somatotropin; 1.
 DR Pfam, PF00103; Hormone 1; 1.
 DR PRINTS, PR00836; SOMATOTROPIN.
 DR PROSITE, PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE, PS00338; SOMATOTROPIN_2; 1.
 KW Direct protein sequencing; Glycoprotein; Hormone; Lactation;
 KW pituitary; signal.
 FT CHAIN 1 30
 FT PIR 31 229 Prolactin.
 FT CARBOHYD 61 61 N-linked (GlcNAc. .); partial.
 FT DISULFID 34 41
 FT DISULFID 88 204
 FT DISULFID 221 229
 FT CONFLICT 4 4
 FT CONFLICT 43 43 R -> T (in Ref. 1).
 FT CONFLICT 152 152 V -> M (in Ref. 1).
 FT CONFLICT 152 152 Q -> E (in Ref. 3).

FT CONFLICT 226 226 D -> N (in Ref. 3).
 SQ SEQUENCE 229 AA; 26141 MW; 908507EB6DA3B47 CRC64;

Query Match 83.7%; Score 872; DB 1; Length 229;
 Best Local Similarity 80.9%; Pred. No. 2.9e-60;
 Matches 161; Conservative 21; Mismatches 17; Indels 0; Gaps 0;

Qy 1 LPICPGAGARCOVTLRDLDFAVAVLSHYTHNLSSEMFSPDRKRYHGRFTTKAINSCHT 60
 Db 31 LPICPGAVNCVSLRDLDFAVAVLSHYTHNLSSEMFSPDRKRYHGRFTTKAINSCHT 90
 Qy 61 SSLATPEDEKQAOQNMOKDFLSILVSLRSWNEPLVHLYTEVRGMOEAPALISRAVEIE 120
 Db 91 SSLSTPEDEKQAOQHHEVTLNLIRVRSWNDDPLVHLYTEVRGMOEAPDALISRAIEIE 150
 Qy 121 EGTKLEEMELIVSQVHPETKENETIYPWGLPSIQMADESRLSAYTNLHLCRRDSH 180
 Db 151 EONKRLGEMKIVQVHPGIVENETIYSWGLPSIQMADEDTRLFAPFNLHLCRRDSH 210
 Qy 181 KIDNYLKLLKCRRIHNNC 199
 Db 211 KIDNYLKLLKCRRIYDSNC 229

RESULT 13

PRL_HORSE STANDARD; PRT; 229 AA.
 ID PRL_HORSE
 AC P12420; Q6UBP9;
 DT 01-OCT-1989 (Rel. 12, Created)
 DT 10-MAY-2005 (Rel. 47, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Prolactin precursor (PRL).
 GN Name=PRL;
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA TISSUE=Pituitary;
 RA MEDLINE=22627807; PubMed=12742553; DOI=10.1016/S0739-7240(03)00013-4;
 RA Clark R.J., Valderama X.P., Furlan M.A., Chedrese P.J.;
 RT "Cloning and nucleotide sequence of the equine and elk pituitary pre-
 RT prolactin cDNA."
 RL Domest. Anim. Endocrinol. 24:367-376 (2003).
 RN [2]
 RP PROTEIN SEQUENCE OF 31-229.
 RA TISSUE=Pituitary;
 RA MEDLINE=88314465; PubMed=3045032;
 RA Lehman S.R., Lahm H.W., Medel M.C., Hulmes J.D., Li C.H.;
 RT "Primary structure of equine pituitary prolactin."
 RL Int. J. Pept. Protein Res. 31:544-554 (1988).
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by
 CC promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC EMBL, AY373339, AAQ076548.1; -, mRNA.
 DR PIR, JK0016; LCHO.
 DR HSSP, P01236; INPD.
 DR InterPro, IPR012351; Cytokine_4_hlx.
 DR InterPro, IPR001400; Somatotropin.
 DR PANTHER, PTHR11417; Somatotropin; 1.
 DR Pfam, PF00103; Hormone 1; 1.
 DR PRINTS, PR00836; SOMATOTROPIN.
 DR PROSITE, PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE, PS00338; SOMATOTROPIN_2; 1.

KM Direct protein sequencing; Glycoprotein; Hormone; Lactation;
 KM Pituitary; Signal.
 FT SIGNAL 1 30
 FT CHAIN 31 229
 FT CARBOHYD 61 229
 FT DISULFID 34 41
 FT DISULFID 88 204
 FT DISULFID 221 229
 FT CONFLICT 119 119
 SQ SEQUENCE 229 AA; 26256 MW; AYB891BA9ADE737C CRC64;
 Query Match 83.6%; Score 871; DB 1; Length 229;
 Best Local Similarity 79.9%; Pred. No. 3.5e-60;
 Matches 159; Conservative 23; Mismatches 17; Indels 0; Gaps 0;
 QY 1 LPICPGANRCQVTLRDLFDRAYVLSHYIHNLSSEMFSEFDRKRYTHRGFTTKAINSCHT 60
 DB 31 LPICPGAVNCQVSLRDLFDRAYVLSHYIHNLSSEMFSEFDRKRYTHRGFTTKAINSCHT 90
 QY 61 SSLATPEDEKQAOQNMCKDFLSIVSLRSWNEPLHYLVTEVRGMQAPPAISKAIVEIE 120
 DB 91 SSLSPEDEKQAOQIHEDLNLILRVLSWMDPLVHLVSEVRGMQAPPAISKAIVEIE 150
 QY 121 EQTKLLERMEILYQVHPETKENETYPVWSGLPSLQMADEESRLSAYYNLHCLRDSDH 180
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 DB 211 KIDNYLKLKCRRIYDNC 229
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 PRL_AILME STANDARD; PRT; 229 AA.
 ID PRL_AILME
 AC O8HXS1;
 DT 10-MAY-2005 (Rel. 47, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Prolactin precursor (PRL).
 GN Name=PRL;
 OS Alluopoda melanoleuca (Giant panda).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Ursidae;
 OC Alluopoda.
 OX NCBI_TaxID=9646;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RC TISSUE=Pituitary;
 RA Zheng X., Zhu M., Zhang Z.;
 RT "Cloning and expression of pituitary prolactin gene in Alluopoda melanoleuca."
 RL Submitted (OCT-2002) to the EMBL/Genbank/DBJ databases.
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
 CC -----
 CC EMBL; AY161285; AAN78320.1; -; mRNA.
 CC HSSP; P01236; 1N9D.
 CC InterPro; IPR012351; Cytochrome_4_hlx.
 CC InterPro; IPR001400; Somatotropin.
 CC PANTHER; PTHR11417; Somatotropin; 1.
 CC Pfam; PF00103; Hormone_1; 1.
 CC PRINTS; PR00836; SOMATOTROPIN.
 CC PROSITE; PS00266; SOMATOTROPIN_1; 1.
 CC PROSITE; PS00338; SOMATOTROPIN_2; 1.

KM Hormone; Lactation; Pituitary; Signal.
 KM Pituitary; Signal.
 FT SIGNAL 1 30
 FT CHAIN 31 229
 FT DISULFID 34 41
 FT DISULFID 88 204
 FT DISULFID 221 229
 SQ SEQUENCE 229 AA; 26236 MW; 441B3D748CFDDBC2 CRC64;
 Query Match 83.5%; Score 870; DB 1; Length 229;
 Best Local Similarity 79.4%; Pred. No. 4.2e-60;
 Matches 158; Conservative 25; Mismatches 16; Indels 0; Gaps 0;
 QY 1 LPICPGANRCQVTLRDLFDRAYVLSHYIHNLSSEMFSEFDRKRYTHRGFTTKAINSCHT 60
 DB 31 LPICPGAVNCQVSLRDLFDRAYVLSHYIHNLSSEMFSEFDRKRYTHRGFTTKAINSCHT 90
 QY 61 SSLATPEDEKQAOQNMCKDFLSIVSLRSWNEPLHYLVTEVRGMQAPPAISKAIVEIE 120
 DB 91 SSLSPEDEKQAOQIHEDLNLILRVLSWMDPLVHLVSEVRGMQAPPAISKAIVEIE 150
 QY 121 EQTKLLERMEILYQVHPETKENETYPVWSGLPSLQMADEESRLSAYYNLHCLRDSDH 180
 DB 151 EQNRRLLEGMEKIVGQVHPETKENETYPVWSGLPSLQMADEESRLSAYYNLHCLRDSDH 210
 QY 181 KIDNYLKLKCRRIHNNNC 199
 DB 211 KIDNYLKLKCRRIYDNC 229
 RESULT 15
 PRL_MUSVI STANDARD; PRT; 229 AA.
 ID PRL_MUSVI
 AC P29234; O864R8;
 DT 01-DEC-1992 (Rel. 24, Created)
 DT 10-MAY-2005 (Rel. 47, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Prolactin precursor (PRL).
 GN Name=PRL;
 OS Mus musculus (house mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae;
 OC Mustelinae; Mustela.
 OX NCBI_TaxID=9607;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RA Vardy T.L., Farid A.;
 RT "Nucleotide sequence variation of the mink preprolactin gene."
 RL Submitted (MAR-2003) to the EMBL/Genbank/DBJ databases.
 RN [2]
 RP NUCLEOTIDE SEQUENCE OF 37-229.
 RX MEDLINE=94140110; PubMed=8307350;
 RA Pereleygina L.M., Baricheva E.M., Sebeleva T.E., Kokora V.A.;
 RT "The evolutionarily conserved gene Nc70F, expressed in nerve tissue of Drosophila melanogaster, encodes a protein homologous to the mouse delta transcription factor."
 RL Genetika 29:1597-1607(1993).
 RN [3]
 RP NUCLEOTIDE SEQUENCE [MRNA] OF 55-229.
 RC TISSUE=Pituitary;
 RA Bondar A.A., Golovin S.J., Mertvetsov N.P.;
 RT "Nucleotide sequence of mink prolactin mRNA from pituitary."
 RL Sibirskii Biol. Zh. 2:10-15(1993).
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
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 CC -----

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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:25:00 ; Search time 165 Seconds
(without alignments)
503.927 Million cell updates/sec

Title: US-09-815-306A-34

Perfect score: 1042
Sequence: 1 LPICPGGARCVTLRLDLD.....HKIDNYLKLCRIIHNNC 199

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications_AA_Main:*
1: /cgn2_6/prodata/1/pubppa/US07_PUBCOMB.pep:*
2: /cgn2_6/prodata/1/pubppa/US08_PUBCOMB.pep:*
3: /cgn2_6/prodata/1/pubppa/US09_PUBCOMB.pep:*
4: /cgn2_6/prodata/1/pubppa/US10_PUBCOMB.pep:*
5: /cgn2_6/prodata/1/pubppa/US10_PUBCOMB.pep:*
6: /cgn2_6/prodata/1/pubppa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1042	100.0	200	4	US-10-449-609-1
2	1042	100.0	227	4	US-10-140-293-4
3	1042	100.0	365	4	US-10-449-609-6
4	1035	99.3	199	4	US-10-153-207-4
5	1035	99.3	200	3	US-09-819-094-9
6	1035	99.3	200	4	US-10-714-067-9
7	1035	99.3	227	3	US-09-815-306-1
8	1035	99.3	227	3	US-10-140-293-3
9	1035	99.3	227	4	US-10-291-172-226
10	1035	99.3	227	4	US-10-221-278-226
11	1031	98.9	228	3	US-09-065-330D-2
12	1023	98.2	199	4	US-10-140-293-12
13	1018.5	97.7	579	4	US-10-449-609-7
14	1018.5	97.7	942	4	US-10-449-609-8
15	887	85.1	199	4	US-10-140-293-24
16	879	84.4	199	4	US-10-140-293-21
17	873	83.8	199	4	US-10-140-293-22
18	857	82.1	199	4	US-10-140-293-16
19	855.5	82.1	198	4	US-10-140-293-10
20	848	81.4	199	4	US-10-140-293-20
21	784	75.2	199	4	US-10-140-293-18
22	774	74.3	199	4	US-10-140-293-19
23	768	73.7	199	4	US-10-140-293-28
24	767	73.6	199	4	US-10-140-293-29
25	764	73.3	199	4	US-10-140-293-17
26	752	72.2	210	4	US-10-424-599-276669
27	740	71.0	199	4	US-10-140-293-25

28	739	70.9	199	4	US-10-140-293-26	Sequence 26, Appl
29	739	70.9	199	4	US-10-140-293-27	Sequence 27, Appl
30	729	70.0	199	4	US-10-140-293-23	Sequence 23, Appl
31	718.5	69.0	258	4	US-10-291-172-602	Sequence 602, App
32	718.5	69.0	258	4	US-10-221-278-602	Sequence 602, App
33	697	66.9	140	3	US-09-819-094-11	Sequence 11, Appl
34	697	66.9	140	3	US-10-714-067-11	Sequence 11, Appl
35	697	66.9	143	3	US-09-819-094-12	Sequence 12, Appl
36	697	66.9	143	4	US-10-714-067-12	Sequence 12, Appl
37	694	66.6	198	4	US-10-140-293-31	Sequence 31, Appl
38	682.5	65.5	199	4	US-10-140-293-32	Sequence 32, Appl
39	655	62.9	197	4	US-10-140-293-13	Sequence 13, Appl
40	649	62.3	197	4	US-10-140-293-15	Sequence 15, Appl
41	630	60.5	125	4	US-10-036-869-25	Sequence 25, Appl
42	630	60.5	253	4	US-10-036-869-27	Sequence 27, Appl
43	626	60.1	124	3	US-09-819-094-10	Sequence 10, Appl
44	626	60.1	124	4	US-10-714-067-10	Sequence 10, Appl
45	604	58.0	197	4	US-10-140-293-14	Sequence 14, Appl

ALIGNMENTS

```
RESULT 1
US-10-449-609-1
; Sequence 1, Application US/10449609
; Publication No. US20040127407A1
; GENERAL INFORMATION:
; APPLICANT: CHEN, MEN Y
; TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
; FILE REFERENCE: 035879-0163
; CURRENT APPLICATION NUMBER: US/10/449,609
; PRIOR FILING DATE: 2003-09-26
; PRIOR APPLICATION NUMBER: 60/384,121
; PRIOR FILING DATE: 2002-05-31
; NUMBER OF SEQ ID NOS: 45
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 200
; TYPE: PRP
; ORGANISM: Homo sapiens
US-10-449-609-1

Query Match      100.0%; Score 1042; DB 4; Length 200;
Best Local Similarity 100.0%; Pred. No. 2.5e-95;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICPGGARCVTLRLDLDRAVYVLSHYTHNLSSEMFSEFDRKRYTGRGFTTAINSCRT 60
   |||||||
DB 2 LPICPGGARCVTLRLDLDRAVYVLSHYTHNLSSEMFSEFDRKRYTGRGFTTAINSCRT 61
   |||||||

QY 61 SSATATEDKQAOQNNQKFLSLIVSLNSWNEPLVHLVTEVGMQAPPAISKAVEIE 120
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DB 62 SSATATEDKQAOQNNQKFLSLIVSLNSWNEPLVHLVTEVGMQAPPAISKAVEIE 121
   |||||||

QY 121 EQTKRLLEMLIVSOVHPETKENETYPVWSGLPSIQMADESRISAYVNLICLRDSD 160
   |||||||
DB 122 EQTKRLLEMLIVSOVHPETKENETYPVWSGLPSIQMADESRISAYVNLICLRDSD 161
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QY 181 KIDNYLKLCRIIHNNC 199
   |||||||
DB 182 KIDNYLKLCRIIHNNC 200
   |||||||

RESULT 2
US-10-140-293-4
; Sequence 4, Application US/10140293
; Publication No. US20030022833A1
; GENERAL INFORMATION:
; APPLICANT: CHEN, MEN Y
; APPLICANT: MAGNER, THOMAS E.
; TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PORLIFERATIVE
```

```

; TITLE OF INVENTION: CONDITIONS
; FILE REFERENCE: 035879/0109
; CURRENT APPLICATION NUMBER: US/10/140,293
; CURRENT FILING DATE: 2002-05-08
; PRIOR APPLICATION NUMBER: US/09/246,041
; PRIOR FILING DATE: 1999-02-05
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 4
; LENGTH: 227
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-140-293-4

Query Match      100.0%; Score 1042; DB 4; Length 227;
Best Local Similarity 100.0%; Pred. No. 2,96-95;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSEMFSEFDRKRYTHGRTTKAINSCHT 60
DB 29 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSEMFSEFDRKRYTHGRTTKAINSCHT 88
QY 61 SSLATPEDEKQAQOQNNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEILSKAVEIE 120
DB 89 SSLATPEDEKQAQOQNNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEILSKAVEIE 148
QY 121 EOTKRLERMEILVSOVHPETKENIYYPVWSGLPSLQWADDESRLSAYYNLLHCLRRDSH 180
DB 149 EOTKRLERMEILVSOVHPETKENIYYPVWSGLPSLQWADDESRLSAYYNLLHCLRRDSH 208
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 209 KIDNYLKLKCRITIHNNNC 227

RESULT 3
US-10-449-609-6
; Sequence 6, Application US/10449609
; Publication No. US20040127407a1
; GENERAL INFORMATION:
; APPLICANT: CHEN, WEN Y
; TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
; TITLE OF INVENTION: FUSION PROTEINS
; FILE REFERENCE: 035879-0163
; CURRENT APPLICATION NUMBER: US/10/449,609
; CURRENT FILING DATE: 2003-09-26
; PRIOR APPLICATION NUMBER: 60/384,121
; PRIOR FILING DATE: 2002-05-31
; NUMBER OF SEQ ID NOS: 45
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 6
; LENGTH: 385
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Fusion protein
US-10-449-609-6

Query Match      100.0%; Score 1042; DB 4; Length 385;
Best Local Similarity 100.0%; Pred. No. 6e-95;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSEMFSEFDRKRYTHGRTTKAINSCHT 60
DB 2 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSEMFSEFDRKRYTHGRTTKAINSCHT 61
QY 61 SSLATPEDEKQAQOQNNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEILSKAVEIE 120
DB 62 SSLATPEDEKQAQOQNNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEILSKAVEIE 121
QY 121 EOTKRLERMEILVSOVHPETKENIYYPVWSGLPSLQWADDESRLSAYYNLLHCLRRDSH 180
DB 122 EOTKRLERMEILVSOVHPETKENIYYPVWSGLPSLQWADDESRLSAYYNLLHCLRRDSH 181
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QY 181 KIDNYLKLKCRITIHNNNC 199
DB 182 KIDNYLKLKCRITIHNNNC 200

RESULT 4
US-10-153-207-4
; Sequence 4, Application US/10153207
; Publication No. US20030153003a1
; GENERAL INFORMATION:
; APPLICANT: James A. Wells
; APPLICANT: Brian C. Cunningham
; TITLE OF INVENTION: GROWTH HORMONE VARIANTS
; FILE REFERENCE: 669.12-US-C7
; CURRENT APPLICATION NUMBER: US/10/153,207
; CURRENT FILING DATE: 2002-05-22
; PRIOR APPLICATION NUMBER: 08/479,884
; PRIOR FILING DATE: 1995-06-07
; PRIOR APPLICATION NUMBER: 08/130,723
; PRIOR FILING DATE: 1994-02-02
; PRIOR APPLICATION NUMBER: 07/960,227
; PRIOR FILING DATE: 1992-10-13
; PRIOR APPLICATION NUMBER: 07/875,204
; PRIOR FILING DATE: 1992-04-27
; PRIOR APPLICATION NUMBER: 07/428,066
; PRIOR FILING DATE: 1989-10-26
; PRIOR APPLICATION NUMBER: 07/264,611
; PRIOR FILING DATE: 1988-10-28
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 199
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-153-207-4

Query Match      99.3%; Score 1035; DB 4; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.2e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSEMFSEFDRKRYTHGRTTKAINSCHT 60
DB 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSEMFSEFDRKRYTHGRTTKAINSCHT 60
QY 61 SSLATPEDEKQAQOQNNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEILSKAVEIE 120
DB 61 SSLATPEDEKQAQOQNNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEILSKAVEIE 120
QY 121 EOTKRLERMEILVSOVHPETKENIYYPVWSGLPSLQWADDESRLSAYYNLLHCLRRDSH 180
DB 121 EOTKRLERMEILVSOVHPETKENIYYPVWSGLPSLQWADDESRLSAYYNLLHCLRRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIHNNNC 199

RESULT 5
US-09-819-094-9
; Sequence 9, Application US/09819094
; Publication No. US20030186382a1
; GENERAL INFORMATION:
; APPLICANT: Weiner, Richard I.
; APPLICANT: Martial, Joseph A.
; APPLICANT: Struman, Ingrid
; APPLICANT: Taylor, Robert
; APPLICANT: Benzien, Franke
; TITLE OF INVENTION: No. US20030186382a1el Antiangiogenic Peptide Agents and Their
; FILE REFERENCE: UCSF-018/020S
; CURRENT APPLICATION NUMBER: US/09/819,094
; CURRENT FILING DATE: 2001-03-27
```


PRIOR APPLICATION NUMBER: 09/076,675
PRIOR FILING DATE: 1998-05-12
PRIOR APPLICATION NUMBER: 60/046,394
PRIOR FILING DATE: 1997-05-12
NUMBER OF SEQ ID NOS: 34
SEQ ID NO 9
LENGTH: 200
TYPE: PRT
ORGANISM: Homo sapiens
US-09-819-094-9

Query Match 99.3%; Score 1035; DB 3; Length 200;
Best Local Similarity 99.5%; Pred. No. 1.2e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPICPGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 60
DB 2 LPICPGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 61
QY 61 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVGMQEAPEALISKAVEIE 120
DB 62 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVGMQEAPEALISKAVEIE 121
QY 121 EOTKRLLEMEILVSGVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 180
DB 122 EOTKRLLEMEILVSGVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 181
QY 181 KIDNYLKLKCRRIHNNC 199
DB 182 KIDNYLKLKCRRIHNNC 200

RESULT 6
US-10-714-067-9
Sequence 9, Application US/10714067
Publication No. US20040077054A1

GENERAL INFORMATION:
APPLICANT: Weiner, Richard I.
APPLICANT: Martini, Joseph A.
APPLICANT: Struman, Ingrid
APPLICANT: Taylor, Robert
APPLICANT: Beniclen, Frauke
TITLE OF INVENTION: Novel Antiangiogenic Peptide Agents and Their
FILE REFERENCE: UCSF-018/0205
CURRENT APPLICATION NUMBER: US/10/714,067
CURRENT FILING DATE: 2003-11-14
PRIOR APPLICATION NUMBER: US/09/819,094
PRIOR FILING DATE: 2001-03-27
PRIOR APPLICATION NUMBER: 09/076,675
PRIOR FILING DATE: 1998-05-12
PRIOR APPLICATION NUMBER: 60/046,394
PRIOR FILING DATE: 1997-05-12
NUMBER OF SEQ ID NOS: 34
SEQ ID NO 9
LENGTH: 200
TYPE: PRT
ORGANISM: Homo sapiens
US-10-714-067-9

Query Match 99.3%; Score 1035; DB 4; Length 200;
Best Local Similarity 99.5%; Pred. No. 1.2e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPICPGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 60
DB 2 LPICPGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 61
QY 61 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVGMQEAPEALISKAVEIE 120
DB 62 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVGMQEAPEALISKAVEIE 121
QY 121 EOTKRLLEMEILVSGVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 180

DB 122 EOTKRLLEMEILVSGVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 181
QY 181 KIDNYLKLKCRRIHNNC 199
DB 182 KIDNYLKLKCRRIHNNC 200

RESULT 7
US-09-815-306-1
Sequence 1, Application US/09815306
Patent No. US20020068043A1

GENERAL INFORMATION:
APPLICANT: CHEN, WEN Y.
APPLICANT: WAGNER, THOMAS E.
TITLE OF INVENTION: BI-FUNCTIONAL CANCER TREATMENT AGENTS
FILE REFERENCE: 035879/0120
CURRENT APPLICATION NUMBER: US/09/815,306
CURRENT FILING DATE: 2001-03-23
PRIOR APPLICATION NUMBER: 60/191,457
PRIOR FILING DATE: 2000-03-23
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-09-815-306-1

Query Match 99.3%; Score 1035; DB 3; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPICPGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 60
DB 29 LPICPGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 88
QY 61 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVGMQEAPEALISKAVEIE 120
DB 89 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVGMQEAPEALISKAVEIE 148
QY 121 EOTKRLLEMEILVSGVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 180
DB 149 EOTKRLLEMEILVSGVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 208
QY 181 KIDNYLKLKCRRIHNNC 199
DB 209 KIDNYLKLKCRRIHNNC 227

RESULT 8
US-10-140-293-3
Sequence 3, Application US/10140293
Publication No. US20030022833A1

GENERAL INFORMATION:
APPLICANT: CHEN, WEN Y.
APPLICANT: WAGNER, THOMAS E.
TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PROLIFERATIVE
FILE REFERENCE: 035879/0109
CURRENT APPLICATION NUMBER: US/10/140,293
CURRENT FILING DATE: 2002-05-08
PRIOR APPLICATION NUMBER: US/09/246,041
PRIOR FILING DATE: 1999-02-05
NUMBER OF SEQ ID NOS: 42
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 3
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-140-293-3

Query Match 99.3%; Score 1035; DB 4; Length 227;

Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAAACQVTLRLDFBRAVVLISHYIHNLSSEMFSEPDKRYTHGSGFTTKAINSCHT 60
Db LPICGGAAACQVTLRLDFBRAVVLISHYIHNLSSEMFSEPDKRYTHGSGFTTKAINSCHT 88
Qy 61 SSLATPBDKQAOQMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 120
Db 89 SSLATPBDKQAOQMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKILKCRITIHNNNC 199
Db 209 KIDNYLKILKCRITIHNNNC 227

RESULT 9
US-10-291-172-226

Sequence 226, Application US/10291172
Publication No. US20030228584A1
GENERAL INFORMATION:

APPLICANT: Hyseq, Inc
TITLE OF INVENTION: No. US20030228584A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 21272-045
CURRENT APPLICATION NUMBER: US/10/291,172
CURRENT FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 09/693,267
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 09/665,363
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 09/616,847
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: 09/596,193
PRIOR FILING DATE: 2000-06-17
PRIOR APPLICATION NUMBER: 09/574,454
PRIOR FILING DATE: 2000-05-19
PRIOR APPLICATION NUMBER: 09/519,705
PRIOR FILING DATE: 2000-03-07
NUMBER OF SEQ ID NOS: 752
SEQ ID NO 226
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-291-172-226

Query Match 99.3%; Score 1035; DB 4; Length 227;

Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAAACQVTLRLDFBRAVVLISHYIHNLSSEMFSEPDKRYTHGSGFTTKAINSCHT 60
Db 29 LPICGGAAACQVTLRLDFBRAVVLISHYIHNLSSEMFSEPDKRYTHGSGFTTKAINSCHT 88
Qy 61 SSLATPBDKQAOQMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 120
Db 89 SSLATPBDKQAOQMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKILKCRITIHNNNC 199
Db 209 KIDNYLKILKCRITIHNNNC 227

RESULT 10

US-10-221-278-226
Sequence 226, Application US/10221278

Publication No. US20040034208A1

GENERAL INFORMATION:

APPLICANT: Hyseq, Inc

TITLE OF INVENTION: No. US20040034208A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 21272-045

CURRENT APPLICATION NUMBER: US/10/221,278

CURRENT FILING DATE: 2002-09-06

PRIOR APPLICATION NUMBER: 09/693,267

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 09/665,363

PRIOR FILING DATE: 2000-09-19

PRIOR APPLICATION NUMBER: 09/616,847

PRIOR FILING DATE: 2000-07-14

PRIOR APPLICATION NUMBER: 09/596,193

PRIOR FILING DATE: 2000-06-17

PRIOR APPLICATION NUMBER: 09/574,454

PRIOR FILING DATE: 2000-05-19

PRIOR APPLICATION NUMBER: 09/519,705

PRIOR FILING DATE: 2000-03-07

NUMBER OF SEQ ID NOS: 752

SEQ ID NO 226

LENGTH: 227

TYPE: PRT

ORGANISM: Homo sapiens

US-10-221-278-226

Query Match 99.3%; Score 1035; DB 4; Length 227;

Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAAACQVTLRLDFBRAVVLISHYIHNLSSEMFSEPDKRYTHGSGFTTKAINSCHT 60
Db 29 LPICGGAAACQVTLRLDFBRAVVLISHYIHNLSSEMFSEPDKRYTHGSGFTTKAINSCHT 88
Qy 61 SSLATPBDKQAOQMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 120
Db 89 SSLATPBDKQAOQMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKILKCRITIHNNNC 199
Db 209 KIDNYLKILKCRITIHNNNC 227

RESULT 11
US-09-065-330D-2

Sequence 2, Application US/09065330D

Publication No. US2001003662A1

GENERAL INFORMATION:

APPLICANT: WALKER, Ameae M.

TITLE OF INVENTION: PROLACTIN ANTAGONISTS AND USES THEREOF

FILE REFERENCE: 39754-0611-1CPLCP

CURRENT APPLICATION NUMBER: US/09/065,330D

CURRENT FILING DATE: 1998-04-23

PRIOR APPLICATION NUMBER: PCT/US97/01435

PRIOR FILING DATE: 1997-01-30

PRIOR APPLICATION NUMBER: US 08/594,809

PRIOR FILING DATE: 1996-01-31

NUMBER OF SEQ ID NOS: 6

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 2

LENGTH: 228

TYPE: PRT

ORGANISM: Homo sapiens

FEATURES:

NAME/KEY: VARIANT

LOCATION: 208

OTHER INFORMATION: Site mutated amino acid residue where the normal

OTHER INFORMATION: codon coding for serine is modified preferably to encode

OTHER INFORMATION: for aspartate or glutamate, most preferably

OTHER INFORMATION: aspartate.
US-09-065-330D-2

Query Match 98.9%; Score 1031; DB 3; Length 228;
Best Local Similarity 99.0%; Pred. No. 3, 7e-94;
Matches 197; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 30 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 89
QY 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120
DB 90 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 149
QY 121 EOTKRLERMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYYNLHLCRLRDSH 180
DB 150 EOTKRLERMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYYNLHLCRLRDSH 209
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 210 KIDNYLKLKCRITIHNNNC 228

RESULT 12

US-10-140-293-12
Sequence 12, Application US/10140293
Publication No. US20030022633A1

GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y.
APPLICANT: WAGNER, THOMAS E.
TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT POLYPERATIVE
FILE REFERENCE: 035879/0109
CURRENT APPLICATION NUMBER: US/10/140,293
CURRENT FILING DATE: 2002-05-08
PRIOR APPLICATION NUMBER: US/09/246,041
PRIOR FILING DATE: 1999-02-05
NUMBER OF SEQ ID NOS: 42
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 12
LENGTH: 199
TYPE: PRT
ORGANISM: Homo sapiens
US-10-140-293-12

Query Match 98.2%; Score 1023; DB 4; Length 199;
Best Local Similarity 98.0%; Pred. No. 1, 9e-93;
Matches 195; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 1 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120
DB 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120
QY 121 EOTKRLERMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYYNLHLCRLRDSH 180
DB 121 EOTKRLERMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYYNLHLCRLRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIHNNNC 199

RESULT 13

US-10-449-609-7
Sequence 7, Application US/10449609
Publication No. US20040127407A1
GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y

TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
FILE REFERENCE: 035879-0163
CURRENT APPLICATION NUMBER: US/10/449,609
CURRENT FILING DATE: 2003-09-26
PRIOR APPLICATION NUMBER: 60/384,121
PRIOR FILING DATE: 2002-05-31
NUMBER OF SEQ ID NOS: 45
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 7
LENGTH: 579
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Fusion protein
US-10-449-609-7

Query Match 97.7%; Score 1018.5; DB 4; Length 579;
Best Local Similarity 99.0%; Pred. No. 2, 3e-92;
Matches 197; Conservative 0; Mismatches 1; Indels 1; Gaps 1;

QY 1 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 2 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120
DB 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120
QY 121 EOTKRLERMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYYNLHLCRLRDSH 180
DB 121 EOTKRLERMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYYNLHLCRLRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIHNNNC 199

RESULT 14

US-10-449-609-8
Sequence 8, Application US/10449609
Publication No. US20040127407A1

GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y
TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
FILE REFERENCE: 035879-0163
CURRENT APPLICATION NUMBER: US/10/449,609
CURRENT FILING DATE: 2003-09-26
PRIOR APPLICATION NUMBER: 60/384,121
PRIOR FILING DATE: 2002-05-31
NUMBER OF SEQ ID NOS: 45
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 8
LENGTH: 942
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Fusion protein
US-10-449-609-8

Query Match 97.7%; Score 1018.5; DB 4; Length 942;
Best Local Similarity 99.0%; Pred. No. 4, 4e-92;
Matches 197; Conservative 0; Mismatches 1; Indels 1; Gaps 1;

QY 1 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 2 LPICPGGAARCCVTLRDLFDRVAVVLSHYIHNLSSMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120
DB 61 SSLATPEDEKQAQNMNQKDFLSLIVSILRSWNEPLVHLVTEVRGQOEAPEALISKAVEIE 120

OY 121 EOTKRLERMELIYSOVHPETKENEIYPVWSGLPSIQMADEBSRLSAYNNLHCLRDSDH 180
 |||||
 Db 121 EOTKRLLEGMLIYSQVHPETKENEIYPVWSGLPSIQMADEBSRLSAYNNLHCLRDSDH 180
 |||||
 OY 181 KIDNYLKLKCRITIHNNNC 199
 |||||
 Db 181 KIDNYLKLKCRITIHNNNC 199
 |||||

RESULT 15

US-10-140-293-24
 ; Sequence 24, Application US/10140293
 ; Publication No. US20030022833A1
 ; GENERAL INFORMATION:
 ; APPLICANT: CHEN, WEN Y.
 ; APPLICANT: WAGNER, THOMAS E.
 ; TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PROLIFERATIVE
 ; TITLE OF INVENTION: CONDITIONS
 ; FILE REFERENCE: 035879/0109
 ; CURRENT APPLICATION NUMBER: US/10/140,293
 ; CURRENT FILING DATE: 2002-05-08
 ; PRIOR APPLICATION NUMBER: US/09/246,041
 ; PRIOR FILING DATE: 1999-02-05
 ; NUMBER OF SEQ ID NOS: 42
 ; SOFTWARE: PatentIn Ver. 2.1
 ; SEQ ID NO 24
 ; LENGTH: 199
 ; TYPE: PRT
 ; ORGANISM: Unknown Sequence
 ; FEATURE:
 ; OTHER INFORMATION: Description of Artificial Sequence: Ancestral mammal
 US-10-140-293-24

Query Match 85.1%; Score 887; DB 4; Length 199;
 Best Local Similarity 82.9%; Pred. No. 6.8e-80;
 Matches 165; Conservative 17; Mismatches 17; Indels 0; Gaps 0;

OY 1 LPICGGARCOVTLRDLFDRAVVLSHYTHNLSEMFSEPDKRYTHGRGFTTKAINSCHT 60
 |||||
 Db 1 LPICSGAVNCQVSLRDLFDRAVILSHYTHNLSEMFSEPDKRYAOGRGFTTKAINSCHT 60
 |||||
 OY 61 SSLATPEDKEQAQOMNQKDFLSLIVSLRSWNEPLVHLVTEVRGMQZAPPAEILSKAVEIE 120
 |||||
 Db 61 SSLSTPEDKEQAQOIHHEVLNLILGLRSWMDPLYHLVTEVRGMQZAPPAEILSRATIEIE 120
 |||||
 OY 121 EOTKRLERMELIYSQVHPETKENEIYPVWSGLPSIQMADEBSRLSAYNNLHCLRDSDH 180
 |||||
 Db 121 EENKRLLEGMEKIVQVHPGAKENEIYSVWSGLPSIQMADEBSRLFAFYNNLHCLRDSDH 180
 |||||
 OY 181 KIDNYLKLKCRITIHNNNC 199
 |||||
 Db 181 KIDNYLKLKCRITIHNNNC 199
 |||||

Search completed: January 6, 2006, 14:36:42
 Job time : 166 secs

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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:28:31 ; Search time 13 Seconds
(without alignments)
129.914 Million cell updates/sec

Title: US-09-815-306A-34
Perfect score: 1042
Sequence: 1 LPICPGGARCCVTLRDLPD.....HKIDNYLKLKCRRIHNNC 199

Scoring table:
BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 61072 seqs, 8486849 residues

Total number of hits satisfying chosen parameters: 61072

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA New:*
1: /cgn2_6/pcodata/2/pubppaa/US08_NEW_PUB.pep:*
2: /cgn2_6/pcodata/2/pubppaa/US06_NEW_PUB.pep:*
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8: /cgn2_6/pcodata/2/pubppaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1035	99.3	199	US-10-735-594-1	Sequence 1, Appl
2	1035	99.3	200	US-10-735-594-4	Sequence 4, Appl
3	1035	99.3	227	US-10-735-594-3	Sequence 3, Appl
4	1035	99.3	227	US-10-821-234-1633	Sequence 1633, Ap
5	1038	29.6	224	US-10-954-468-34	Sequence 34, Appl
6	198	19.0	286	US-10-954-468-25	Sequence 25, Appl
7	198	19.0	287	US-10-954-468-17	Sequence 17, Appl
8	198	19.0	287	US-10-954-468-24	Sequence 24, Appl
9	198	19.0	288	US-10-954-468-22	Sequence 20, Appl
10	198	19.0	288	US-10-954-468-22	Sequence 22, Appl
11	198	19.0	289	US-10-954-468-19	Sequence 23, Appl
12	198	19.0	289	US-10-954-468-19	Sequence 19, Appl
13	198	19.0	289	US-10-954-468-21	Sequence 21, Appl
14	198	19.0	290	US-10-954-468-18	Sequence 18, Appl
15	198	19.0	293	US-10-954-468-14	Sequence 14, Appl
16	198	19.0	515	US-10-954-468-33	Sequence 33, Appl
17	198	19.0	516	US-10-954-468-32	Sequence 32, Appl
18	198	19.0	517	US-10-954-468-16	Sequence 16, Appl
19	198	19.0	518	US-10-954-468-31	Sequence 31, Appl
20	198	19.0	519	US-10-954-468-30	Sequence 30, Appl
21	198	19.0	520	US-10-954-468-13	Sequence 13, Appl
22	198	19.0	756	US-10-954-468-15	Sequence 15, Appl
23	198	19.0	756	US-10-954-468-27	Sequence 27, Appl
24	198	19.0	758	US-10-954-468-28	Sequence 28, Appl
25	198	19.0	759	US-10-954-468-12	Sequence 12, Appl

26	198	19.0	759	US-10-954-468-26	Sequence 26, Appl
27	198	19.0	759	US-10-954-468-29	Sequence 29, Appl
28	190	18.2	191	US-11-033-365-160	Sequence 160, App
29	190	18.2	192	US-11-033-365-159	Sequence 159, App
30	190	18.2	192	US-11-033-365-198	Sequence 198, App
31	190	18.2	192	US-11-033-365-200	Sequence 200, App
32	190	18.2	192	US-11-187-552-1	Sequence 1, Appl
33	190	18.2	193	US-11-033-365-196	Sequence 196, App
34	190	18.2	196	US-11-033-365-199	Sequence 199, App
35	189.5	18.2	202	US-11-144-889A-2	Sequence 2, Appl
36	187	17.9	192	US-10-821-234-1224	Sequence 1224, App
37	105	10.1	133	US-11-078-189-12	Sequence 12, Appl
38	89.5	8.6	739	US-11-174-150-25	Sequence 25, Appl
39	86	8.3	708	US-11-174-150-26	Sequence 26, Appl
40	86	8.3	736	US-11-174-150-26	Sequence 1205, Ap
41	85	8.2	143	US-10-821-234-1205	Sequence 13, Appl
42	84.5	8.1	703	US-11-078-189-13	Sequence 20, Appl
43	83.5	8.0	825	US-11-078-189-9	Sequence 9, Appl
44	82	7.9	736	US-11-078-189-9	Sequence 392, App
45	81.5	7.8	626	US-11-082-389-392	

ALIGNMENTS

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RESULT 1
US-10-735-594-1
; Sequence 1, Application US/10735594
; Publication No. US20050250689A1
; GENERAL INFORMATION:
; APPLICANT: BROOKS, CHARLES L.
; TITLE OF INVENTION: ANTAGONISTS FOR HUMAN PROLACTIN
; FILE REFERENCE: 18525-04051
; CURRENT FILING DATE: 2003-12-12
; PRIOR APPLICATION NUMBER: 60/433,370
; PRIOR FILING DATE: 2002-12-13
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 1
; LENGTH: 199
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-735-594-1

Query Match      99.3%; Score 1035; DB 6; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.1e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 LPICPGGARCCVTLRDLPDRAVVLISHYTHNLSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
      |||||||
DB      1 LPICPGGARCCVTLRDLPDRAVVLISHYTHNLSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
      |||||||

QY      61 SSILATPEDEKQAOQNMOKDFLSILISVNSNEPLVLTVEYRGQDEAEALISKAVEIE 120
      |||||||
DB      61 SSILATPEDEKQAOQNMOKDFLSILISVNSNEPLVLTVEYRGQDEAEALISKAVEIE 120
      |||||||

QY      121 EOTKRLLEMEILIVSQVHETKENETIYPWSGIPSIQMADEBSRLSAYTNLHCLRDSDH 180
      |||||||
DB      121 EOTKRLLEMEILIVSQVHETKENETIYPWSGIPSIQMADEBSRLSAYTNLHCLRDSDH 180
      |||||||

QY      181 KIDNYLKLKCRRIHNNC 199
      |||||||
DB      181 KIDNYLKLKCRRIHNNC 199
      |||||||

RESULT 2
US-10-735-594-4
; Sequence 4, Application US/10735594
; Publication No. US20050250689A1
; GENERAL INFORMATION:
; APPLICANT: BROOKS, CHARLES L.
```

APPLICANT: PETERSON, FRANCIS C.
TITLE OF INVENTION: ANTAGONISTS FOR HUMAN PROLACTIN
FILE REFERENCE: 18525-04051
CURRENT APPLICATION NUMBER: US/10/735,594
CURRENT FILING DATE: 2003-12-12
PRIOR APPLICATION NUMBER: 60/433,370
PRIOR FILING DATE: 2002-12-13
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO: 4
LENGTH: 200
TYPE: PRT
ORGANISM: Homo sapiens
US-10-735-594-4

Query Match 99.3%; Score 1035; DB 6; Length 200;
Best Local Similarity 99.5%; Pred. No. 1.1e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGRTTKAINSCHT 60
Db 2 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGRTTKAINSCHT 61
Qy 61 SSLATPEDEKQAOQMNQDPLSLIVSILRSWNEPLYLHYTEVRGQGEAPEALISKAVEIE 120
Db 62 SSLATPEDEKQAOQMNQDPLSLIVSILRSWNEPLYLHYTEVRGQGEAPEALISKAVEIE 121
Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
Db 122 EOTKRLLEGMEILIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 181
Qy 181 KIDNYLKLKCRILIHNNC 199
Db 182 KIDNYLKLKCRILIHNNC 200

RESULT 3
US-10-735-594-3
Sequence 3, Application US/10735594
Publication No. US20050250689A1
GENERAL INFORMATION:
APPLICANT: BROOKS, CHARLES L.
APPLICANT: PETERSON, FRANCIS C.
TITLE OF INVENTION: ANTAGONISTS FOR HUMAN PROLACTIN
FILE REFERENCE: 18525-04051
CURRENT APPLICATION NUMBER: US/10/735,594
CURRENT FILING DATE: 2003-12-12
PRIOR APPLICATION NUMBER: 60/433,370
PRIOR FILING DATE: 2002-12-13
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO: 3
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-735-594-3

Query Match 99.3%; Score 1035; DB 6; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.3e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGRTTKAINSCHT 60
Db 29 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGRTTKAINSCHT 88
Qy 61 SSLATPEDEKQAOQMNQDPLSLIVSILRSWNEPLYLHYTEVRGQGEAPEALISKAVEIE 120
Db 89 SSLATPEDEKQAOQMNQDPLSLIVSILRSWNEPLYLHYTEVRGQGEAPEALISKAVEIE 148
Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLLEGMEILIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 208

Qy 181 KIDNYLKLKCRILIHNNC 199
Db 209 KIDNYLKLKCRILIHNNC 227

RESULT 4
US-10-821-234-1633
Sequence 1633, Application US/10821234
Publication No. US20050255114A1
GENERAL INFORMATION:
APPLICANT: Labat, Ivan
APPLICANT: Stache-Crain, Birgit
APPLICANT: Andarmanli, Susan
APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
FILE REFERENCE: 821A
CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR FILING DATE: 2003-04-07
NUMBER OF SEQ ID NOS: 1704
SOFTWARE: PC_SEQ_genes Version 1.0
SEQ ID NO: 1633
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-821-234-1633

Query Match 99.3%; Score 1035; DB 6; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.3e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGRTTKAINSCHT 60
Db 29 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGRTTKAINSCHT 88
Qy 61 SSLATPEDEKQAOQMNQDPLSLIVSILRSWNEPLYLHYTEVRGQGEAPEALISKAVEIE 120
Db 89 SSLATPEDEKQAOQMNQDPLSLIVSILRSWNEPLYLHYTEVRGQGEAPEALISKAVEIE 148
Qy 121 EOTKRLERMEILIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLLEGMEILIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKLKCRILIHNNC 199
Db 209 KIDNYLKLKCRILIHNNC 227

RESULT 5
US-10-954-468-34
Sequence 34, Application US/10954468
Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glaes, David J.
TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
FILE REFERENCE: REG 1070A
CURRENT APPLICATION NUMBER: US/10/954,468
CURRENT FILING DATE: 2004-10-01
PRIOR APPLICATION NUMBER: 60/507,168
PRIOR FILING DATE: 2003-09-30
PRIOR APPLICATION NUMBER: 60/516,806
PRIOR FILING DATE: 2003-11-03
PRIOR APPLICATION NUMBER: 60/529,826
PRIOR FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: 60/534,654
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/534,819
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/554,640
PRIOR FILING DATE: 2004-03-19
PRIOR APPLICATION NUMBER: 60/573,525
PRIOR FILING DATE: 2004-05-21

PRIOR APPLICATION NUMBER: 60/581,833
PRIOR FILING DATE: 2004-06-22
PRIOR APPLICATION NUMBER: 60/584,956
PRIOR FILING DATE: 2004-07-02
NUMBER OF SEQ ID NOS: 54
SOFTWARE: PaetSeq for Windows Version 4.0
SEQ ID NO 34
LENGTH: 224
TYPE: PRT
ORGANISM: homo sapien
US-10-954-468-34

Query Match 29.6%; Score 308; DB 6; Length 224;
Best Local Similarity 33.8%; Pred. No. 6, 9e-22;
Matches 67; Conservative 43; Mismatches 84; Indels 4; Gaps 1;

QY 2 PFCPGAARCOVTLRDLFDRAVVLVSHYIHNLSSEMFSEFDKRYTHGRGFTITKAINSCHTS 61
DB 31 PFCANRNGCFMSPEDTFLAGSLSHNISIEVSELTREKRTSVNVSGLRDKSPKRCNTS 90
QY 62 SLATPEDEKQAOQMNQKDFLSLIVSLRSWNEPLVHLYTEVRGMQAPAPALISKAVEIEE 121
DB 91 FLPTPENKQARLTHYSALLKSGAMLDAMESPLDVLVSELSTIKVNPDIISKATDIK 150
QY 122 QTKRLERELIVSOVHPETKENETYPVWSGLPSLQMADEBSRLSYNNLLCLRDSDHK 181
DB 151 KINAVANGVNAIMSTWLQNGDEKKNPAM----FLQSDNEARHISLYGMISCLDNDPFK 206
QY 182 IDNYLKLKCRILHNHC 199
DB 207 VDILVNLKCYMLKIDNC 224

RESULT 6

US-10-954-468-25
Sequence 25, Application US/10954468
Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glase, David J.
TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
FILE REFERENCE: REG 1070A
CURRENT APPLICATION NUMBER: US/10/954,468
PRIOR FILING DATE: 2004-10-01
PRIOR APPLICATION NUMBER: 60/507,168
PRIOR FILING DATE: 2003-09-30
PRIOR APPLICATION NUMBER: 60/516,806
PRIOR FILING DATE: 2003-11-03
PRIOR APPLICATION NUMBER: 60/529,826
PRIOR FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: 60/534,654
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/534,819
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/554,640
PRIOR FILING DATE: 2004-03-19
PRIOR APPLICATION NUMBER: 60/573,525
PRIOR FILING DATE: 2004-05-21
PRIOR APPLICATION NUMBER: 60/581,833
PRIOR FILING DATE: 2004-06-22
PRIOR APPLICATION NUMBER: 60/584,956
PRIOR FILING DATE: 2004-07-02
NUMBER OF SEQ ID NOS: 54
SOFTWARE: PaetSeq for Windows Version 4.0
SEQ ID NO 25
LENGTH: 286
TYPE: PRT
ORGANISM: homo sapien
US-10-954-468-25

Query Match 19.0%; Score 198; DB 6; Length 286;
Best Local Similarity 24.9%; Pred. No. 1, 7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

QY 1 LPICPGAARCOVTLRDLFDRAVVLVSHYIHNLSSEMFSEFDKRY---THGRGFTITKAINS 57
DB 18 LPMOEGSAFPPIPLSRFLPDNMLRAHRLHQAFTYQGEFEAYIPKQKYSFLQNPOTS 77
QY 58 -CHTSLATPEDKEQAOQMNQKDFLSLIVSLRSWNEPLVHLYTE-----VGMQAPAPA 111
DB 78 LCFSESIPTPSNREFTQKSNLELRISLLIQSWLEBPQFLRSVPANSLVYGASDSNVY 137
QY 112 ILSKAVEIEBQTKLERME-----LIVSQVHPETKENETYPVWSGLPSLQMADEBSR 164
DB 138 DLK--DLBEGIQTLMGRLDGSPTGQIFKQYTSKPDNTN-----SHNDDA 181
QY 165 LSAVYNLHCLRDSKIDNYLKLKCRILHNH 197
DB 182 LKNGYGLVCPKMDKXETFLRIYQCRSVESG 214

RESULT 7

US-10-954-468-17
Sequence 17, Application US/10954468
Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glase, David J.
TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
FILE REFERENCE: REG 1070A
CURRENT APPLICATION NUMBER: US/10/954,468
PRIOR FILING DATE: 2004-10-01
PRIOR APPLICATION NUMBER: 60/507,168
PRIOR FILING DATE: 2003-09-30
PRIOR APPLICATION NUMBER: 60/516,806
PRIOR FILING DATE: 2003-11-03
PRIOR APPLICATION NUMBER: 60/529,826
PRIOR FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: 60/534,654
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/534,819
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/554,640
PRIOR FILING DATE: 2004-03-19
PRIOR APPLICATION NUMBER: 60/573,525
PRIOR FILING DATE: 2004-05-21
PRIOR APPLICATION NUMBER: 60/581,833
PRIOR FILING DATE: 2004-06-22
PRIOR APPLICATION NUMBER: 60/584,956
PRIOR FILING DATE: 2004-07-02
NUMBER OF SEQ ID NOS: 54
SOFTWARE: PaetSeq for Windows Version 4.0
SEQ ID NO 17
LENGTH: 287
TYPE: PRT
ORGANISM: homo sapien
US-10-954-468-17

Query Match 19.0%; Score 198; DB 6; Length 287;
Best Local Similarity 24.9%; Pred. No. 1, 7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

QY 1 LPICPGAARCOVTLRDLFDRAVVLVSHYIHNLSSEMFSEFDKRY---THGRGFTITKAINS 57
DB 18 LPMOEGSAFPPIPLSRFLPDNMLRAHRLHQAFTYQGEFEAYIPKQKYSFLQNPOTS 77
QY 58 -CHTSLATPEDKEQAOQMNQKDFLSLIVSLRSWNEPLVHLYTE-----VGMQAPAPA 111
DB 78 LCFSESIPTPSNREFTQKSNLELRISLLIQSWLEBPQFLRSVPANSLVYGASDSNVY 137
QY 112 ILSKAVEIEBQTKLERME-----LIVSQVHPETKENETYPVWSGLPSLQMADEBSR 164
DB 138 DLK--DLBEGIQTLMGRLDGSPTGQIFKQYTSKPDNTN-----SHNDDA 181
QY 165 LSAVYNLHCLRDSKIDNYLKLKCRILHNH 197
DB 182 LKNGYGLVCPKMDKXETFLRIYQCRSVESG 214

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RESULT 8
US-10-954-468-24
; Sequence 24, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaes, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 24
; LENGTH: 287
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-24

Query Match      19.0%; Score 198; DB 6; Length 287;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

QY      1 LPICGGAACQVTLRDLFRAVVLSHYIHNLSSEMFSEFDKRY---THGRGFTTKAINS 57
DB      18 LPMIOESGAFPTTIPLSRIFDNMLRAHRLHQLADFTYQEFBEAYIPKQKTSFLONPOTS 77
QY      58 -CHTSLATPEDKEQAQNMOKDFLSLIVSLRSWNEPLVHLVTE-----VRGQEAPEA 111
DB      78 LCFSESIPTPSNRRETQKSNLELRISLLLIQSWLEPVQFLRSVFANSVLYGASDSNVY 137
QY      112 ILSKAVEIEBOTKRLERME-----LIVSQHPETKENETIYVWSGLPSLQMADESR 164
DB      138 DLK--DLREGIQTLMGRLEDSGSPRTGOIFKQTVSKFDTN-----SHNDDA 181
QY      165 LSAYYNLHCLRRDSHKIDNYLKLKCRHINN 197
DB      182 LKNYGLLYCFRKMDKVFETFLRIVQCRSVEGS 214

RESULT 9
US-10-954-468-20
; Sequence 20, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaes, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
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; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 20
; LENGTH: 288
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-20

Query Match      19.0%; Score 198; DB 6; Length 288;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

QY      1 LPICGGAACQVTLRDLFRAVVLSHYIHNLSSEMFSEFDKRY---THGRGFTTKAINS 57
DB      18 LPMIOESGAFPTTIPLSRIFDNMLRAHRLHQLADFTYQEFBEAYIPKQKTSFLONPOTS 77
QY      58 -CHTSLATPEDKEQAQNMOKDFLSLIVSLRSWNEPLVHLVTE-----VRGQEAPEA 111
DB      78 LCFSESIPTPSNRRETQKSNLELRISLLLIQSWLEPVQFLRSVFANSVLYGASDSNVY 137
QY      112 ILSKAVEIEBOTKRLERME-----LIVSQHPETKENETIYVWSGLPSLQMADESR 164
DB      138 DLK--DLREGIQTLMGRLEDSGSPRTGOIFKQTVSKFDTN-----SHNDDA 181
QY      165 LSAYYNLHCLRRDSHKIDNYLKLKCRHINN 197
DB      182 LKNYGLLYCFRKMDKVFETFLRIVQCRSVEGS 214

RESULT 10
US-10-954-468-22
; Sequence 22, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaes, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
```



```

1 TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
2 FILE REFERENCE: REG 1070A
3 CURRENT APPLICATION NUMBER: US/10/954,468
4 PRIOR FILING DATE: 2004-10-01
5 PRIOR APPLICATION NUMBER: 60/507,168
6 PRIOR FILING DATE: 2003-09-30
7 PRIOR APPLICATION NUMBER: 60/516,806
8 PRIOR FILING DATE: 2003-11-03
9 PRIOR APPLICATION NUMBER: 60/529,826
10 PRIOR FILING DATE: 2003-12-16
11 PRIOR APPLICATION NUMBER: 60/534,654
12 PRIOR FILING DATE: 2004-01-07
13 PRIOR APPLICATION NUMBER: 60/534,819
14 PRIOR FILING DATE: 2004-01-07
15 PRIOR APPLICATION NUMBER: 60/554,640
16 PRIOR FILING DATE: 2004-03-19
17 PRIOR APPLICATION NUMBER: 60/573,525
18 PRIOR FILING DATE: 2004-05-21
19 PRIOR APPLICATION NUMBER: 60/581,833
20 PRIOR FILING DATE: 2004-06-22
21 PRIOR APPLICATION NUMBER: 60/584,956
22 NUMBER OF SEQ ID NOS: 54
23 SOFTWARE: FastSeq for Windows Version 4.0
24 SEQ ID NO 21
25 LENGTH: 289
26 TYPE: PRP
27 ORGANISM: homo sapien
28 OS-10-954-468-21

```

```

Query Match: 19.0%; Score 198; DB 6; Length 289;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6

QY      1 LPICPGARCCQVTLRLDLPDRAVVLVSHYVHNLSEMFSEPDKRY---THGRGFIITKAINS 57
DB      18 LPMLOGSSAPPTPLSLRFLDNLMLRHRHQALPDTQGEFBAVYIPKQKVSFLQNPOTS 77

QY      58 -CHTSSLATPEDEKQAOQNNQKQDFLSLVSILRSNNPELHYLVY-----YRGQGEAPEA 111
DB      78 LCFSESIFPTSSNNEETQOKSNLRLRISLLILQSWLEPQVQFRSVPANSLVYGASDSNVY 137

QY      112 ILISAVVIEQOTRLRLERME-----LIVSQVHPETKENEIYVPWGLPILQMADESR 164
DB      138 DLK--DLEGGITLWGRLEDSPRGTQIFKQTYSKPDTN-----SHNDDA 181

QY      165 LSAVYMLHCLRRDSHKINDVYLKLCRIIHNH 197
DB      182 LKNVGYLGYCFRRKMDKVFETRLIVQCRSEVS 214

RESULT 14
; Sequence 18, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glass, David J.
; TITLE OR INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; CURRENT FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19

```

```

PRIORITY APPLICATION NUMBER: 60/573,525
PRIORITY FILING DATE: 2004-05-21
PRIORITY APPLICATION NUMBER: 60/581,833
PRIORITY FILING DATE: 2004-06-22
PRIORITY APPLICATION NUMBER: 60/584,956
PRIORITY FILING DATE: 2004-07-02
NUMBER OF SEQ ID NOS: 54
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 18
LENGTH: 230
TYPE: PRF
ORGANISM: homo sapien
US-10-954-468-18
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Query Match	19.0%	Score 198	DB 6	Length 290
Best Local Similarity	24.9%	Pred. No. 1,7e-11		
Matches	53	Conservative 48	Mismatches 80	Indels 32
			Gaps 6	
QY	1	LPIPGGAARCOVTLRLDLPRAVVLVSHYIHNLSSEMFSEEDKRY---	THRGGEFTTKAINS	57
Db	18	LPWIOGSAFETIPLSLRFDNAMLRARLHQADPTQOEFEEAVYIPKEOKYSFLONPOTS		77
QY	58	-CHTSSLATPEEDKQAOQMOQKDFLSIVSLRSWNEPLYLWVE----	VRGMOEABEA	111
Db	78	LCFSESTPPTBNRETOQKSNLELRISLLIQSWLEPVQGLRSVFNLSLYGASDSNVY		137
QY	112	ILSKAVEIEBQTKLLERME-----LIVSQVPETKENEIYPVWSGLPSLOMADEESR		164
Db	138	DLK-LDEBGIQTLMRLEDGSPRTGQIFKQYTSKEDTN-----SHNDDA		181
QY	165	LSATYNNLHLCRRDSHKIDNLYLTKGRIIHNH		197
Db	182	LKNYGLLYCPRKMDKVEFTLRIVQGSVEGS		214

```

RESULT 15
US-10-954-468-14
; Sequence 14, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glass, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 293
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-14

Query Match      19.0%; Score 198; DB 6; Length 293;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;

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	Matches	53;	Conservative	48;	Mismatches	80;	Indels	32;	Gaps	6;
Qy	1	LEIPCGAARCOVTLRDLFDRAVVL	SHYIHNLSSEMFSEFDKRY--	THGRGPTKAINS	57					
Db	18	LFWLQEGSAFPTIPLSRLLFDNM	LRAHRLHQLAFDTYQFEFEAYIPKEQKYSFLQNPQTS	77						
Qy	58	-CHTSSLATPEDKEQAQOMNQD	FLSLIVISLRSNNEPLVHLVTE----	VKGMQEAPEA	111					
Db	78	LCFSESIPTPSNREETQOKSNLELRIS	LLIOSWLEPVQFLRSVPANSLVYGASDSNVY	137						
Qy	112	IISKAVEIEEQTKRLERME-----	LIVSQVHPETKENETYPVWSGLPSLQMADESR	164						
Db	138	DLTK--DLEEGIGTLWGRLEDS	PRTGQIFKQYTSKFDTN-----	SHNDA	181					
Qy	165	LSAYVNLHCLRRDSHKIDNYLKLKCR	IIHNN	197						
Db	182	LKKNYGLLYCFRKMDKVE	FLRLIVQGRVSGS	214						

Search completed: January 6, 2006, 14:37:02
 Job time : 14 secs

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